OFFICIAL PUBLICATION

UNIVERSITY OF MARYLAND

GENERAL CATALOG

1946-1947

1807-1856-1920

AGRICULTURE

ARTS AND SCIENCES

BUSINESS AND PUBLIC ADMINISTRATION

EDUCATION

ENGINEERING

HOME ECONOMICS

MILITARY SCIENCE, PHYSICAL EDUCATION AND RECREATION

GRADUATE STUDIES

DENTISTRY

LAW

MEDICINE

PHARMACY

NURSING

EXTENSION

RESEARCH

TABLE OF CONTENTS

Page
Calendar for 1946, 1947, and 1948 4
University Calendar for 1946-1947 5
Board of Regents 7
Officers of Administration and Instructional Staff at College Park 8

SECTION I—GENERAL

Preliminary Information 18
Organization of the University 19
Physical Facilities 21
Admission Procedure and Regulation of Studies 23
Definition of Residence 29
Fees and Expenses 29
Student Health and Welfare 34
Living Arrangements 35
Student Aid and Employment 38
Honors and Awards 40
Student Activities and Organizations 44

SECTION II—RESIDENT INSTRUCTION AT COLLEGE PARK

College of Agriculture 49
College of Arts and Sciences 73
College of Business and Public Administration 105
College of Education 134
College of Engineering 155
College of Home Economics 172
College of Military Science and Tactics, Physical Education and Recreation 184
Graduate School 197
Summer Session 206
Evening Courses 207
SECTION III—COURSE OFFERINGS AT COLLEGE PARK, LISTED ALPHABETICALLY BY DEPARTMENTS 208

SECTION IV—RESIDENT INSTRUCTION AT BALTIMORE

School of Dentistry 352
School of Law 357
School of Medicine 362
School of Pharmacy 378
University Hospital 383
School of Nursing 383
SECTION V—AGRICULTURAL EXTENSION, RESEARCH, AND REGULATORY AGENCIES 384
SECTION VI—RECORDS AND STATISTICS 400
Degrees Conferred, Certificates and Honors Awarded, and Summary of Enrollments for 1944-1945 400
GENERAL INDEX 413

Official Publication of the University of Maryland

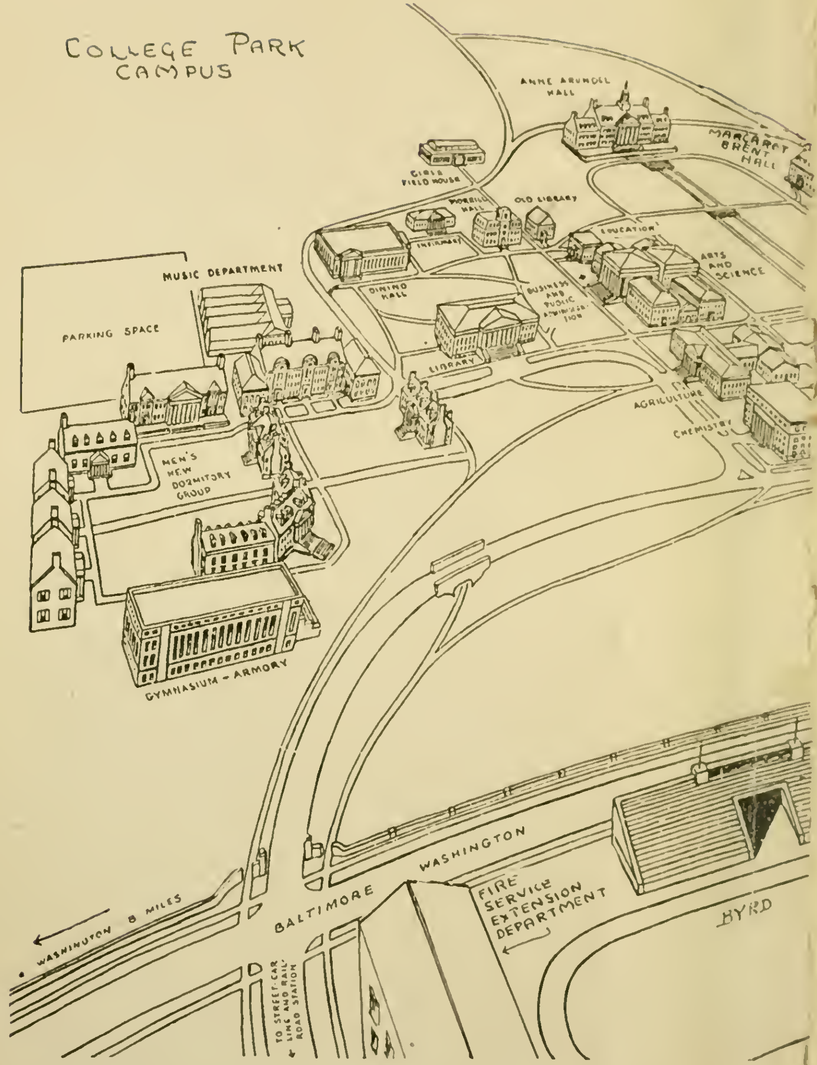
Vol. 43, No. 3 July, 1946

CATALOG

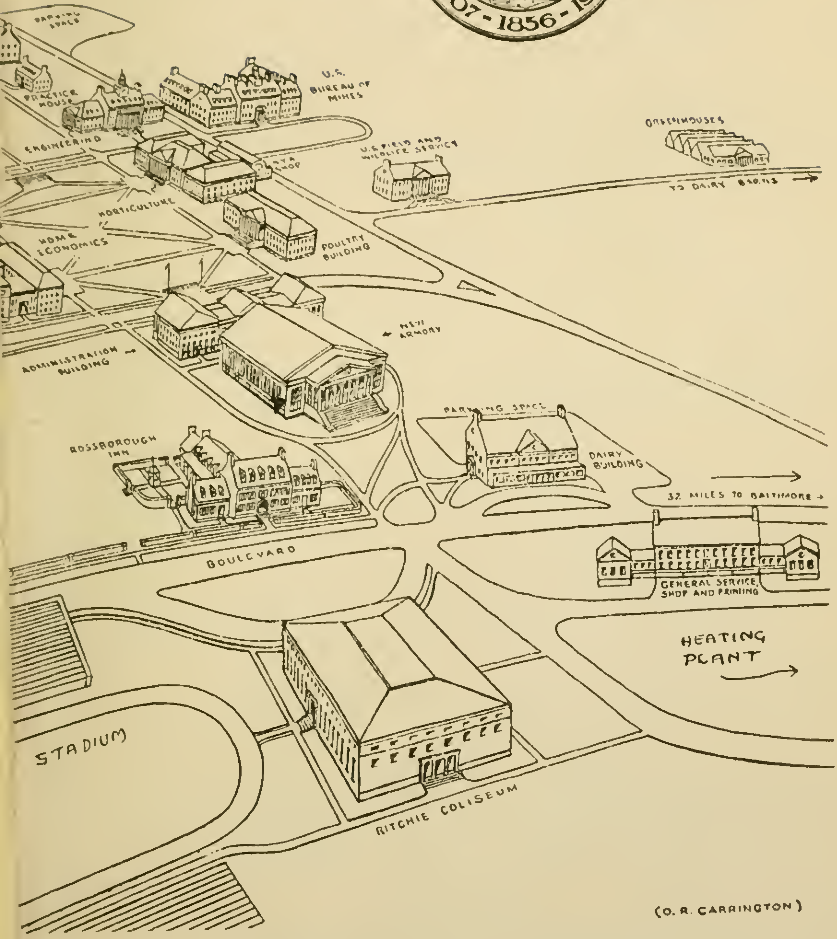
1946 • 1947

The provisions of this publication are not to be regarded as an irrevocable contract between the student and the University. The University reserves the right to change any provision or requirement at any time within the student's term of residence. The University further reserves the right at any time, to ask a student to withdraw when it considers such action is for the best interests of the University.

University of Maryland official publication issued semi-monthly during May, June and July and bi-monthly the rest of the year at College Park, Maryland. Entered as second class matter, under Act of Congress of August 24, 1912.


COLLEGE PARK
CAMPUS
ANNE ARUNDEL HALL
MARGARET BRENT HALL
GIRLS FIELD HOUSE
MORRILL HALL
OLD LIBRARY
EDUCATION
ARTS AND SCIENCE
INFIRMARY
MUSIC DEPARTMENT
PARKING SPACE
DINING HALL
BUSINESS AND PUBLIC ADMINISTRATION
LIBRARY
AGRICULTURE
CHEMISTRY
MEN'S NEW DORMITORY GROUP
GYMNASIUM - ARMORY
WASHINGTON 8 MILES
BALTIMORE
WASHINGTON
TO STREET-CAR LINE AND RAIL-ROAD STATION
FIRE SERVICE EXTENSION DEPARTMENT
BYRD

UNIVERSITY OF MARYLAND
1807 - 1856 - 1920


PARKING SPACE
PRACTICE HOUSE
U.S. BUREAU OF MINES
ENGINEERING
SHOP
U.S. FIELD AND WILDLIFE SERVICE
GREENHOUSES
TO DAIRY BARNS
HORTICULTURE
HOME ECONOMICS
POULTRY BUILDING
NEW ARMORY
ADMINISTRATION BUILDING
PARKING SPACE
DAIRY BUILDING
ROSSBOROUGH INN
32 MILES TO BALTIMORE
BOULEVARD
GENERAL SERVICE, SHOP AND PRINTING
HEATING PLANT
STADIUM
RITCHIE COLISEUM

(O. R. CARRINGTON)

CALENDAR

1946

JULY

S	M	T	W	T	F	S
..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	..	..	..

AUGUST

S	M	T	W	T	F	S
..	..	..	..	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
..	..	..	..	..	..	..

SEPTEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	..	..	..	..	..
..	..	..	..	..	..	..

OCTOBER

S	M	T	W	T	F	S
..	..	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	..	..

NOVEMBER

S	M	T	W	T	F	S
..	..	..	..	..	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
..	..	..	..	..	..	..

DECEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	..	..	..	..

1947

JANUARY

S	M	T	W	T	F	S
..	..	..	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	..

FEBRUARY

S	M	T	W	T	F	S
..	..	..	..	..	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	..
..	..	..	..	..	..	..

MARCH 6

S	M	T	W	T	F	S
..	..	..	..	..	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	..	..	..	..	..

APRIL

S	M	T	W	T	F	S
..	..	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	..	..	..

MAY

S	M	T	W	T	F	S
..	..	..	..	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
..	..	..	..	..	..	..

JUNE

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	..	..	..	..	..

JULY

S	M	T	W	T	F	S
..	..	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	..	..

AUGUST 6

S	M	T	W	T	F	S
..	..	..	..	..	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	..	..	..	..	..	..

SEPTEMBER

S	M	T	W	T	F	S
..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	..	..	..	..
..	..	..	..	..	..	..

OCTOBER

S	M	T	W	T	F	S
..	..	..	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	..

NOVEMBER 6

S	M	T	W	T	F	S
..	..	..	..	..	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	..	..	..	..	..	..

DECEMBER

S	M	T	W	T	F	S
..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	..	..	..

1948

JANUARY

S	M	T	W	T	F	S
..	..	..	..	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

FEBRUARY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	..	..	..	..	..	..
..	..	..	..	..	..	..

MARCH

S	M	T	W	T	F	S
..	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	..	..	..
..	..	..	..	..	..	..

APRIL

S	M	T	W	T	F	S
..	..	..	..	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	..

MAY

S	M	T	W	T	F	S
..	..	..	..	..	..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	..	..	..	..	..

JUNE

S	M	T	W	T	F	S
..	..	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	..	..	..

UNIVERSITY CALENDAR

1946 – 1947

COLLEGE PARK

1946

Summer Session, 1946

June 24	Monday	Registration for summer session
June 25	Tuesday	Instruction begins
August 2	Friday	Summer session ends

Short Courses

June 17-22	Monday-Saturday	Rural Women's Short Course
August 5-10	Monday-Saturday	4-H Club Week
September 3-6	Tuesday-Friday	Firemen's Short Course

First Semester

September 16-21	Monday-Saturday	Registration for first semester
September 23	Monday	Instruction begins
October 10	Thursday, 10:30 A. M.	General convocation of faculty and students
October 15	Tuesday	Reception to the Faculty
November 27	Wednesday after last class	Thanksgiving recess begins.
December 2	Monday, 8:00 A. M.	Thanksgiving recess ends.
December 20	Friday after last class	Christmas recess begins
1947		
January 6	Monday, 8:00 A. M.	Christmas recess ends
January 20	Monday	Charter Day, Alumni Banquet
January 21-28	Tuesday-Tuesday, inclusive	First semester examinations

Second Semester

February 3-6	Monday-Thursday	Registration for second semester
February 7	Friday	Instruction begins
February 22	Saturday	Washington's Birthday, holiday
March 25	Tuesday	Celebration of Maryland Day
April 3	Thursday after last class	Easter recess begins
April 9	Wednesday, 8:00 A. M.	Easter recess ends
May 30	Friday	Memorial Day, holiday
June 1	Sunday	Baccalaureate exercises
May 29-June 6	Thursday-Friday	Second semester examinations
June 7	Saturday	Commencement

Summer Session, 1947

June 23	Monday	Registration
June 24	Tuesday	Instruction begins
June 28	Saturday	Classes as usual
July 4	Friday	Holiday
July 12	Saturday	Classes as usual
August 1	Friday	Summer session ends

Short Courses

June 16-21	Monday-Saturday	Rural Women's Short Course
August 4-9	Monday-Saturday	4-H Club Week

NOTE: The academic calendars of the professional schools in Baltimore will be found in separate catalogs published by these schools.

THE SPACIOUS NEW GYMNASIUM-ARMORY
University of Maryland, College Park, Md.

BOARD OF REGENTS OF THE UNIVERSITY OF MARYLAND AND MARYLAND STATE BOARD OF AGRICULTURE

		Term Expires
WILLIAM P. COLE, JR., *Chairman*	Baltimore	1949
THOMAS R. BROOKES, *Vice-Chairman*	Bel Air	1952
STANFORD Z. ROTHSCHILD, *Secretary*	Baltimore	1952
J. MILTON PATTERSON, *Treasurer*	Baltimore	1953
E. PAUL KNOTTS	Denton	1954
GLENN L. MARTIN	Baltimore	1951
CHARLES P. MCCORMICK	Baltimore	1948
HARRY H. NUTTLE	Denton	1950
PHILIP C. TURNER	Baltimore	1950
MILLARD E. TYDINGS	Washington, D. C.	1951
MRS. JOHN L. WHITEHURST	Baltimore	1947

Members of the Board are appointed by the Governor of the State for terms of nine years each, beginning the first Monday in June.

The President of the University of Maryland is, by law, Executive Officer of the Board.

The State Law provides that the Board of Regents of the University of Maryland shall constitute the Maryland State Board of Agriculture.

A regular meeting of the Board is held the last Friday in each month, except during the months of July and August.

GENERAL ADMINISTRATIVE BOARD

PRESIDENT BYRD, *Chairman*
MISS PREINKERT, *Secretary*

DEAN APPLEMAN
MR. BENTON
DEAN BRECHBILL
DR. BRUECKNER
PRESIDENT BYRD
MR. COBEY
DEAN COTTERMAN
DEAN DUMEZ
DEAN EPPLEY
DR. ETIENNE
MR. FOGG
COLONEL GRISWOLD
MR. HASZARD
DEAN HOWELL
DIRECTOR KEMP
DR. LONG
DEAN MOUNT
DEAN PATTERSON
MISS PREINKERT
DEAN PYLE
DEAN ROBINSON
DEAN STAMP
DEAN STEINBERG
DEAN SYMONS
MR. WEBER
DEAN WYLIE

EDUCATIONAL COUNCIL

THE PRESIDENT
THE REGISTRAR
DEANS OF COLLEGES
HEADS OF EDUCATIONAL DEPARTMENTS

OFFICERS OF ADMINISTRATION

H. C. BYRD, LL.D., D.Sc., President of the University.

T. B. SYMONS, M.S., D.Agri., Director of Extension Service, Dean of College of Agriculture.

J. FREEMAN PYLE, Ph.D., Dean of College of Business and Public Administration and Acting Dean of College of Arts and Sciences.

J. BEN ROBINSON, D.D.S., F.A.C.D., Dean of School of Dentistry.

HENRY H. BRECHBILL, Ph.D., Acting Dean of College of Education, Acting Director of Summer School, Acting Director of Evening Extension Division.

S. S. STEINBERG, B.E., C.E., Dean of College of Engineering.

C. O. APPLEMAN, Ph.D., Dean of Graduate School.

M. MARIE MOUNT, M.A., Dean of College of Home Economics.

ROGER HOWELL, LL.B., Ph.D., Dean of School of Law.

ROBERT U. PATTERSON, M.D., C.M., LL.D., Dean of School of Medicine, Superintendent of University Hospital.

FLORENCE M. GIPE, M.S., R.N., Superintendent of Nurses, Director of School of Nursing.

ANDREW G. DUMEZ, Ph.G., Ph.D., Dean of School of Pharmacy.

H. F. COTTERMAN, Ph.D., Assistant Dean of College of Agriculture.

W. B. KEMP, Ph.D., Director of the Agricultural Experiment Station.

W. J. HUFF, Ph.D., D.Sci., Director of the Engineering Experiment Station.

GEARY F. EPPLEY, M.S., Dean of Men.

ADELE H. STAMP, M.A., Dean of Women.

H. C. GRISWOLD, Col. Inf., U. S. Army, Commandant and Professor of Military Science and Tactics.

ALMA H. PREINKERT, M.A., Registrar.

EDGAR F. LONG, Ph.D., Acting Director of Admissions.

CHARLES L. BENTON, M.S., C.P.A., Comptroller.

CARL W. E. HINTZ, A.M.L.S., Librarian.

T. A. HUTTON, M.A., Purchasing Agent.

HAROLD A. SAYLES, A.B., Assistant Superintendent of University Hospital.

WOLCOTT L. ETIENNE, B.S., M.D., Director and Physician.

GEORGE W. FOGG, M.A., Personnel Director.

GEORGE O. WEBER, B.S., Business Manager.

FRANK K. HASZARD, B.F.S., Director of Procurement and Supply.

OTHER ADMINISTRATIVE OFFICERS

Office of the President

WILLIAM J. MCWILLIAMS	Assistant to the President

Office of the Director of Admissions

MARY BURKE	Assistant, Baltimore Division Office

Office of the Registrar

MARY SPENCE, B.A.,	Assistant Registrar
LISETTE THOMPSON	Assistant, Records
FLORENCE STAFFORD	Assistant, Baltimore Division Office

Dean of Women's Office

Rosalie Leslie, M.A.	Assistant Dean of Women
Marian Johnson, M.A.	Assistant Dean of Women

Office of Business Management

C. L. Benton, M.S., C.P.A.	Comptroller
James W. Rountree, Jr., C.P.A.	Chief Auditor
W. W. Cobey, A.B.	Cashier
T. A. Hutton, M.A.	Purchasing Agent
Herbert E. Russell	Chief Engineer
Edith M. Frothingham	Administrative Assistant
German V. Rice	Military Property Custodian
W. V. Maconachy	Assistant Comptroller (Baltimore)
Charles W. Spicer	Chief Accountant (Baltimore)
J. H. Tucker	Chief Clerk (Baltimore)

Dining Hall

Charles V. Delahunt	General Manager

Student Health Service

Dr. Wolcott L. Etienne, B.S., M.D.	Director of Health
Dr. W. Allen Griffith	Physician Consultant
Miss Estella C. Baldwin, R.N.	Supervisor of Nurses

Publicity

Harvey L. Miller	Director of Publicity and Publications

THE UNIVERSITY LIBRARIES

Carl W. E. Hintz, A.B., A.B.L.S., A.M.L.S.	Director of Libraries

College Park

Louise W. Getchell, A.B., B.S.L.S.	Catalog Librarian
Jane B. Hobson, B.A., B.S.	Loan Librarian
Anna M. Urban, A.B., A.B.L.S.	Reference Librarian

Baltimore

Dental-Medical-Pharmacy Libraries

Ida M. Robinson, A.B., B.S.L.S.	Librarian
Beatrice Marriott, B.S.	Assistant Librarian (Dentistry)
Ruth Lee Briscoe	Assistant Librarian (Medicine)
Hilda E. Moore, A.B., A.B.L.S.	Assistant Librarian (Pharmacy)

Law Library

Anne C. Bagby, A.B., B.L.S.	Librarian

FACULTY COMMITTEES

Admission, Guidance, and Adjustment

PROFESSOR BAMFORD, *Chairman*; DEANS EPPLEY, STAMP; MISS PREINKERT; PROFESSORS CURTISS, HODGINS, PRAHL, QUIGLEY, REID, SCHINDLER, D. D. SMITH, WHITE.

Athletics and Physical Education

DEAN EPPLEY, *Chairman*; COLONEL GRISWOLD; DIRECTOR KEMP; DEAN STAMP; PROFESSORS BENTON, BURNETT, CORY, SUPPLEE.

Coordination of Agricultural Activities

DIRECTOR SYMONS, *Chairman;* DIRECTOR KEMP; DEAN COTTERMAN; ASSISTANT DIRECTORS CORY, OSWALD; STATE CHEMIST BOPST; PROFESSORS BRUECKNER, HAUT, HOLMES, JULL, LEINBACH.

Educational Policy, Standards, and Coordination

DR. G. A. KELLY, *Chairman*; PROFESSORS BAMFORD, DRAKE, CAIRNS, DEVAULT, GREGORY, HARTUNG, MARTIN, MCNAUGHTON, STRAHORN, WYLIE, YOUNGER.

Extension and Adult Education

PROFESSOR G. D. BROWN, *Chairman*; ASSISTANT DIRECTORS KELLAR, OSWALD; PROFESSORS BAKER, DEVAULT, EHRENSBERGER, GREENE, MARTIN, PHILLIPS, STEINMEYER.

Libraries

PROFESSOR CARDWELL, *Chairman*; DIRECTOR LONG; PROFESSORS ANDERSON, RUSSELL BROWN, CORCORAN, ENGLAND, HACKMAN, HARMAN, REEVE, SPENCER, STEINMEYER, STRAHORN.

Publications

MR. KANGAS, *Chairman*; DIRECTOR KEMP; ASSISTANT DIRECTOR OSWALD; MISS PREINKERT; PROFESSOR BALL; MR. MILLER; MISS E. FROTHINGHAM.

Public Functions and Public Relations

DIRECTOR SYMONS, *Chairman*; DEANS DUMEZ, MOUNT, ROBINSON, STAMP; COLONEL GRISWOLD; MISS PREINKERT; PROFESSORS BOPST, CORY, GEWEHR, JULL, RANDALL, REID, SNYDER, STEINMEYER, YOUNGER.

Religious Affairs and Social Service

ASSISTANT DEAN LESLIE, *Chairman;* PROFESSORS GEWEHR, W. P. GREEN, HAMILTON, MCNAUGHTON, RANDALL, REID, WHITE, WOODS.

Scholarship and Student Aid

DEAN COTTERMAN, *Chairman*; DEANS EPPLEY, MOUNT, STAMP; DIRECTOR LONG; PROFESSORS REID, STEINMEYER; MR. COBEY.

Student Life

DR. WHITE, *Chairman*; DEANS EPPLEY, STAMP; COLONEL GRISWOLD; MISS PREINKERT; DR. ETIENNE; PROFESSORS ALLEN, BENTON, BURNETT, EHRENSBERGER, HARMAN, KRAMER, LEJINS, LEINBACH, PHILLIPS, REID; MISS LESLIE.

INSTRUCTIONAL STAFF, COLLEGE PARK

(For the Year 1945-46)

George J. Abrams, M.S., Assistant Professor of Apiculture.

Arthur M. Ahalt, M.S., Associate Professor of Agricultural Education.

Emily W. Akin, M.S., Instructor in Textiles and Clothing.

Oscar N. Allen, Ph.D., Professor of Bacteriology. ?

Russell B. Allen, B.S., Associate Professor of Civil Engineering.

George F. Alrich, Ph.D., Instructor in Mathematics.

Mary E. Ambrose, M.S., Instructor in Chemistry.

Mary L. Andrews, Ph.D., Instructor in English.

Gustave W. Adrian, B.A., Assistant Professor of Foreign Languages.

Charles O. Appleman, Ph.D., Professor of Botany and Plant Physiology.

Alice C. Baker, M.S., Assistant in Chemistry.

Oliver E. Baker, Ph.D., Professor of Geography and Lecturer on Agricultural Economics.

Herman Ball, B.A., Instructor in Physical Education.

Cecil R. Ball, M.A., Assistant Professor of English.

Ronald Bamford, Ph.D., Professor of Botany.

Edwin M. Barry, M.A., Instructor in Education.

Miriam L. Beall, M.S., Instructor in Foods and Nutrition.

Madge Beauman, R.N., Assistant in Physical Education.

Harold Benjamin, Ph.D., Consulting Dean of the College of Education.

Charles L. Benton, M.A., C.P.A., Professor of Accounting.

Rachel J. Benton, Ph.D., Professor of Physical Education.

Myron H. Berry, M.S., Associate Professor of Dairy Husbandry.

Donald T. Bonney, Ph.D., Associate Professor of Chemical Engineering.

Henry H. Brechbill, Ph.D., Professor of Education.

Ferdinand G. Brickwedde, Ph.D., Professor of Physics.

George M. Briggs, Ph.D., Associate Professor of Poultry Husbandry.

Allison T. Brown, Instructor in Interior Design.

Glen D. Brown, M.A., Professor of Industrial Education.

Russell G. Brown, Ph.D., Associate Professor of Plant Physiology.

Eleanor B. Browne, Ph.D., Instructor in Education.

Arthur L. Brueckner, B.S., D.V.M., Professor of Veterinary Medicine.

Marie D. Bryan, M.A., Instructor in English and Education.

Paul W. Bryant, Professor of Physical Education.

Maurine D. Burgess, Instructor in Nursery School Music.

Sumner O. Burhoe, Ph.D., Assistant Professor of Zoology.

Eleanor C. Buzzi, Assistant in Chemistry.

Leo F. Cain, Ph.D., Instructor in Education.

Margaret B. Cain, Ed.D., Instructor in English.

Gordon M. Cairns, Ph.D., Professor of Dairy Husbandry.

Charles E. Calhoun, A.B., M.B.A., Professor of Finance.

Guy A. Cardwell, Ph.D., Professor of English.

Ray W. Carpenter, A.B., LL.B., Professor of Agricultural Engineering.

Suzanne F. Cassels, B.A., Instructor in Home Economics.
Verne E. Chatelain, Ph.D., Professor of History.
Cornelius W. Cissell, B.A., Associate Professor of Accounting.
Weston R. Clark, Ph.D., Professor of Psychology.
Eli W. Clemens, Ph.D., Professor of Economics.
Lucienne C. Clemens, B.A., Instructor in Foreign Languages.
Gladys A. Colgrove, M.A., Instructor in Physical Education.
Franklin D. Cooley, B.A., Associate Professor of English.
George F. Corcoran, M.S., Professor of Electrical Engineering.
Ernest N. Cory, Ph.D., Professor of Entomology.
Harold F. Cotterman, Ph.D., Professor of Agricultural Education.
Carroll E. Cox, Ph.D., Assistant Professor of Plant Pathology.
Jane H. Crow, M.S., Instructor in Institutional Management.
Geogre H. Cuneo, B.S., Assistant Professor of Art.
Dieter Cunz, Ph.D., Assistant Professor of Foreign Languages.
Vienna Curtiss, M.A., Professor of Practical Art.
Henry P. Dantzig, B.S., Assistant in Mathematics.
Dorothy S. Dare, B.S., Assistant in Mathematics.
Gomer L. Davies, B.S., Lecturer on Radio Communications.
Evelyn Davis, B.A., Instructor in Physical Education for Women.
Helen M. DeLoach, B.S., Instructor in Physical Education for Women.
Samuel H. DeVault, Ph.D., Professor of Agricultural Economics and Farm Management.
Harold M. DeVolt, B.S., M.S., D.V.M., Associate Professor of Animal Pathology.
Dudley Dillard, Ph.D., Associate Professor of Economics.
Eitel W. Dobert, Assistant in Foreign Languages.
James C. Dockeray, Ph.D., Professor of Finance.
Charles H. Dodson, M/Sgt., U.S.A., Instructor in Military Science and Tactics.
Nathan L. Drake, Ph.D., Professor of Organic Chemistry.
George W. Dunlap, A.B., Captain, U.S.A., Assistant Professor of Military Science and Tactics.
E. Parker Dupler, M.A., Instructor in Speech.
Luke E. Ebersole, M.A., Instructor in Sociology and Education.
Ray Ehrensberger, Ph.D., Professor of Speech.
Matthew F. Ellmore, B.S., Instructor in Dairy Husbandry.
Rachel Emmett, M.A., Instructor in Physical Education for Women.
Curry N. England, M.A., Assistant Professor of Home Management.
John E. Faber, Ph.D., Associate Professor of Bacteriology.
William E. Falls, Ph.D., Professor of Foreign Languages.
George H. Fettus, Jr., M.Ed., Associate Professor of Psychology.
Humphry S. Finney, Lecturer in Animal Husbandry.
Robert T. Fitzhugh, Ph.D., Associate Professor of English.
Rachel Frank, M.A., Instructor in Foreign Languages.
James R. Frothingham, Assistant Professor of Military Science and Tactics.

William K. Gautier, M.S., Instructor in Physics.
Milo V. Gibbons, M.A., Instructor in Mathematics.
Guy W. Gienger, M.S., Associate Professor of Agricultural Engineering.
Edward W. Glazener, B.S., Assistant Professor of Poultry Husbandry.
Andre N. Glezal, Ph.D., Lecturer in Mathematics.
Carl W. Gohr, B.S., Assistant Professor of Civil Engineering.
Richard A. Good, Ph.D., Assistant Professor of Mathematics.
Ira A. Gould, Ph.D., Professor of Dairy Manufacturing.
William H. Gravely, Jr., M.A., Assistant Professor of English.
Jean T. Gray, M.A., Assistant Professor of Physical Education.
Wilson P. Green, M.S., Associate Professor of Mechanical Engineering.
Meyer Greenberg, B.A., M.H.L., Instructor in Hebrew.
Romain G. Greene, M.A., Instructor in English.
Moses A. Greenfield, Ph.D., Instructor in Physics.
Edward W. Gregory, Jr., Ph.D., Professor of Socilology.
Allan G. Gruchy, Ph.D., Professor of Economics.
Ray C. Hackman, Ph.D., Instructor in Psychology.
F. Louise Hagel, B.S., Instructor in Foods and Nutrition.
Eugene T. Halaas, Ph.D., Director of the Bureau of Business Research.
Dick W. Hall, Ph.D., Assistant Professor of Mathematics.
Arthur B. Hamilton, M.S., Associate Professor of Agricultural Economics.
Susan E. Harman, Ph.D., Professor of English.
Irvin C. Haut, Ph.D., Associate Professor of Pomology.
Elizabeth E. Haviland, Ph.D., Instructor in Entomology.
Charles R. Hayleck, Jr., B.S., Assistant in Engineering Drawing.
Henry B. Heiberger, Jr., B.S., Assistant in Chemistry.
Donald C. Hennick, B.S., Instructor in Mechanical Engineering.
Robert A. Herring, Jr., M.S., Lecturer on Electric Transients.
Carl W. E. Hintz, A.B., A.M.L.S., Professor of Library Science.
Lawrence J. Hodgins, B.S., Associate Professor of Electrical Engineering.
Richard I. Hofstadter, Ph.D., Assistant Professor of History.
Jean M. Hogan, B.S., Instructor in Art.
Delight W. Holt, B.S., Instructor in English.
Frederick V. Hoogland, M.A., Instructor in Foreign Languages
R. Lee Hornbake, Ph.D., Associate Professor of Industrial Education.
Harry B. Hoshall, B.S., M.E., Assistant Professor of Mechanical Engineering.
Alston Householder, Ph.D., Lecturer in Mathematics.
George E. Hudson, Ph.D., Instructor in Physics.
Wilbert J. Huff, Ph.D., D.Sc., Professor of Chemical Engineering.
Charles E. Hutchinson, Ph.D., Assistant Professor of Sociology.
John W. Jackson, M.S., M.E., Associate Professor of Mechanical Engineering.
Stanley B. Jackson, Ph.D., Assistant Professor of Mathematics.
Walter F. Jeffers, Ph.D., Assistant Professor of Plant Pathology.
John G. Jenkins, Ph.D., Professor of Psychology.

ZENOBIA JIMENEZ, Instructor in Foreign Languages.
A. MORGAN JOHNSON, B.S., Assistant Professor of Civil Engineering.
MORLEY A. JULL, Ph.D., Professor of Poultry Husbandry.
GEORGE J. KABAT, M.A., Instructor in Education.
MARTIN KATZIN, M.S.E., Lecturer in Electrical Engineering.
GEORGE A. KELLY, Ph.D., Associate Professor of Psychology.
JAMES H. KEHOE, B.S., Instructor in Physical Education for Men.
JOHN J. KELLY, M.A., Assistant Professor of English.
EARLE H. KENNARD, Ph.D., Professor of Physics.
EDITH G. KERN, M.A., Instructor in Foreign Languages.
WILLIAM H. KINHART, Ph.D., Instructor in Education.
GERALD W. KINZELMAN, B.S., Lecturer in Mechanical Engineering.
CHARLES A. KIRKPATRICK, Ph.D., Assistant Professor of Marketing and Business Administration.
CHARLES F. KRAMER, M.A., Associate Professor of Foreign Languages.
NORMAN C. LAFFER, Ph.D., Associate Professor of Bacteriology.
OTIS E. LANCASTER, Ph.D., Lecturer in Mathematics.
GEORGE S. LANGFORD, Ph.D., Associate Professor of Entomology.
HAZEL W. LAPP, M.S., Assistant Professor of Foods and Nutrition.
PAUL B. LARSEN, M.S., Assistant Professor of Dairy Husbandry.
NATHALIA V. LAUTNER, M.A., Instructor in Nursery School Methods.
LAURENCE L. LAYTON, Ph.D., Assistant Professor of Chemistry.
FREDERICK H. LEINBACH, Ph.D., Professor of Animal Husbandry.
PETER P. LEJINS, Ph.D., Associate Professor of Sociology.
CONRAD H. LIDEN, B.S., Assistant in Agronomy.
ROBERT A. LITTLEFORD, Ph.D., Assistant Professor of Zoology.
NORMAN C. LOFFLER, Ph.D., Associate Professor of Bacteriology.
EDWARD M. LONSDALE, M.S., Instructor in Electrical Engineering.
GEORGE F. MADIGAN, Ph.D., Assistant Professor of Soils.
JAMES B. MAHON, Assistant Professor of Military Science and Tactics.
WILLIAM MALKIN, B.S., Instructor in Mathematics.
MINERVA L. MARTIN, Ph.D., Instructor in English.
MONROE H. MARTIN, Ph.D., Professor of Mathematics.
FRIEDA M. MCFARLAND, M.A., Professor of Textiles and Clothing.
LAURA N. MCLAUGHLIN, M.A., Instructor in English.
JAMES G. MCMANAWAY, Ph.D., Lecturer in English.
EDNA B. MCNAUGHTON, M.A., Professor of Home Economics Education.
DEVOE MEADE, Ph.D., Professor of Animal Husbandry.
FRANCES H. MILLER, M.A., Instructor in English.
HARVEY L. MILLER, Professor of Physical Education for Men.
J. ALBERT MILLER, M.A., Administrative Coordinator of Practice Teaching.
T. FAY MITCHELL, M.A., Assistant Professor of Textiles and Clothing.
ARVAL S. MOLL, B.S., Assistant in Zoology.
EMORY A. MOONEY, Ph.D., Assistant Professor of English.
MARION S. MOONEY, M.A., Instructor in English.
RAYMOND MORGAN, Ph.D., Professor of Physics.

Earl W. Mounce, M.A., LL.B., LL.M., Associate Professor of Law and Labor.
M. Marie Mount, M.A., Professor of Home and Institution Management.
Ralph D. Myers, Ph.D., Associate Professor of Physics.
Grover C. Niemeyer, Ph.D., Assistant Professor of Speech.
Fay J. Norris, T/Sgt., U.S.A., Instructor in Military Science and Tactics.
Evelyn L. Oginsky, M.S., Instructor in Bacteriology.
Jane H. O'Neill, B.A., Instructor in Secretarial Training.
C. Eugene Osborne, M.A., Instructor in Speech.
Elaine Pagel, Ph.D., Instructor in Speech.
Arthur C. Parsons, M.A., Assistant Professor of Foreign Languages.
Arthur S. Patrick, M.A., Assistant Professor of Secretarial Training.
Norman E. Phillips, Ph.D., Professor of Zoology.
Hugh B. Pickard, Ph.D., Assistant Professor of Chemistry.
Joseph M. Power, Assistant in Music.
Augustus J. Prahl, Ph.D., Professor of Foreign Languages.
Ernest F. Pratt, Ph.D., Assistant Professor of Chemistry.
Yolanda Pratt, Ph.D., Instructor in Chemistry.
Edward H. Price, B.S., Assistant in Chemistry.
Hester B. Provenson, LL.B., Assistant Professor of Speech.
George D. Quigley, B.S., Associate Professor of Poultry Husbandry.
Robert B. Quinn, Ph.D., Professor of Physics.
B. Harlan Randall, B.Mus., Professor of Music.
Joseph M. Ray, Ph.D., Professor of Political Science.
William M. Redd, Jr., B.S., Assistant in Engineering.
E. Wilkins Reeve, Ph.D., Associate Professor of Chemistry.
James H. Reid, M.A., Associate Professor of Economics.
Harry H. Rice, M.A., Assistant Professor of Physical Education.
Lawrence A. Ringerberg, Ph.D., Assistant Professor of Mathematics.
Robert M. Rivello, B.S., Instructor in Engineering Drawing.
Marion P. Robinson, Ph.D., Instructor in Speech.
Raiko H. Ruzic, Ph.D., Lecturer in Russian.
Ann M. St. John, B.S., Assistant in Speech.
Elon G. Salisbury, Ph.D., Instructor in Mathematics.
Norbert H. Sand, M.A., Instructor in English.
Fillmore H. Sanford, Ph.D., Assistant Professor of Psychology.
Herbert Schaumann, Ph.D., Instructor in English.
Alvin W. Schindler, Ph.D., Associate Professor of Education.
Albert L. Schrader, Ph.D., Professor of Pomology.
Mark Schweitzer, Ph.D., Instructor in Foreign Languages.
Leland E. Scott, M.S., Associate Professor of Horticulture.
H. Burton Shipley, B.S., Assistant Professor of Physical Education.
Charles A. Shreeve, Jr., M.S., Associate Professor of Mechanical Engineering.
Otto Siebeneichen, M/Sgt., U.S.A., Band Instructor, Military Science and Tactics.

Maurice R. Siegler, B.S., Asosciate Professor of Art.
Arthur W. Silver, M.A., Assistant Professor of History.
Denzel D. Smith, Ph.D., Assistant Professor of Psychology.
Virginia S. Smith, M.A., Instructor in Foreign Languages.
W. Conley Smith, M.S., Assistant Professor of Electrical Engineering.
W. Mayo Smith, Jr., M.S., Instructor in Chemistry,
Robert E. Snodgrass, A.B., Lecturer on Entomology.
James S. Spamer, B.S., Instructor in Civil Engineering.
Jesse W. Sprowls, Ph.D., Professor of Psychology
Kenneth M. Stampp, Ph.D., Associate Professor of History.
S. Sidney Steinberg, B.E., C.E., Professor of Civil Engineering.
Reuben G. Steinmeyer, Ph.D., Professor of Political Science.
William J. Svirbely, M.S., D.Sc., Associate Professor of Chemistry.
Esther T. Taylor, M.S., Assistant Professor of Foods and Nutrition.
Dwight R. Thomas, B.A., Assistant in Speech.
Royle P. Thomas, Ph.D., Professor of Soils.
Charles W. Thornthwaite, Ph.D., Professor of Natural and Human Resources.
Arthur S. Thurston, M.S., Professor of Floriculture and Landscape Gardening.
Theron A. Tompkins, M.A., Assistant Professor of Physical Education.
Edward D. Trembly, M.B.A., C.P.A., Associate Professor of Accounting.
Horace M. Trent, Ph.D., Lecturer on Operational Circuit Analysis.
Willis L. Tessler, Ph.D., Assistant Professor of Zoology.
Emil S. Troelston, Ph.D., Associate Professor of Agricultural Economics.
Reginald V. Truitt, Ph.D., Lecturer on Education.
Anna M. Urban, A.B., A.B.L.S., Instructor in Library Science.
John L. Vanderslice, Ph.D., Assistant Professor of Mathematics.
William VanRoyen, Ph.D., Professor of Geography.
T. C. Gordon Wagner, Ph.D., Associate Professor of Mathematics.
W. Paul Walker, M.S., Associate Professor of Agricultural Economics.
Edgar P. Walls, Ph.D., Professor of Canning Crops.
Waldo E. Waltz, Ph.D., Professor of Political Science.
Kathryn M. P. Ward, M.A., Assistant Professor of English.
Dorothy M. Watson, M.S., Instructor in Natural and Human Resources.
Catherine MacN. Weaver, M.A., Instructor in English.
Charles E. White, Ph.D., Professor of Inorganic Chemistry.
Raymond C. Wiley, Ph.D., Associate Professor of Analytical Chemistry.
Edgar S. Wood, M.A., Instructor in Speech.
Albert W. Woods, B.S., Assistant Professor of Physical Education and Education.
G. Forrest Woods, Ph.D., Associate Professor of Chemistry.
Mark W. Woods, Ph.D., Associate Professor of Plant Pathology.
John E. Younger, Ph.D., Professor of Mechanical Engineering.
Harold Yourman, M.B.A., 1st Lt., U.S.A., Assistant Professor of Military Science and Tactics.

W. Gordon Zeeveld, Ph.D., Associate Professor of English.
R. Yvonne Zenn, M.A., Instructor in Physical Education for Women.

GRADUATE ASSISTANTS AND FELLOWS

Graduate Assistants

Name	*Department*
Francis R. Adams, Jr., A.B.	English
Martha Lovell Adams, B.S.	Chemistry
Sidney Baldwin, B.S.	Chemistry
Joseph H. Bilbrey, Jr., B.S.	Mathematics
Thomas H. Blachburn, A.B.	Mathematics
Jean M. Boyer, B.S.	Mathematics
Louise A. Bradley, M.A.	English
Martha C. Bradley, B.S.	Zoology
Raymond N. Doetsch, M.A.	Bacteriology
Robert S. Doyle, B.S.	Chemistry
John D. Draper, B.S.	Chemistry
Sidney R. Galler, B.S.	Zoology
Francis V. Getty, M.A.	English
Frederick M. Johnson, B.S.	Zoology
Flora Kearney, M.A.	English
Hamill T. Kenny, M.A.	English
Milton Charles Kurtz, B.S.	Zoology
Irvin Levin, M.S.	Chemistry
William E. Lusby, Jr., B.S.	Chemistry
Robert E. Maizell, B.S.	Chemistry
Salvatore F. Martino, B.S.	Physics
Robert D. Rappleye, B.S.	Botany
Lawson L. Rosenberg, B.A.	Chemistry
Harlan Rosenblatt, M.S.	Physics
Alexander Sadle, M.S.	Chemistry
Herman Sanders, M.S.	Chemistry
Marvin Schwartz, B.A.	Chemistry
Roy K. Skipton, B.S.	Zoology
John Strerling, Jr., A.B.	Chemistry
Robert N. Stewart, A.B.	Botany
Allen R. Stickley, A.B.	Physics
Robert T. Thibadeau, B.S.	Zoology
Irwin W. Tucker, B.S.	Chemistry
Charlotte I. Weiss, B.A.	English
Ira U. White, B.S.	Zoology
Gladys A. Wiggin, M.A.	Education

Fellows

Constance A. Hartman, M.A.	English

SECTION I—General

PRELIMINARY INFORMATION

The University of Maryland, in addition to being a State University, is the "Land-Grant" institution of Maryland. The University is co-educational in all of its branches.

College Park

The undergraduate colleges and the Graduate School of the University of Maryland are located at College Park, Prince George's County, Maryland, on a beautiful tract of rolling, wooded land, less than eight miles from the heart of the Nation's capital, Washington, D. C. This nearness to Washington, naturally, is of immeasurable advantage to students because of the unusual library facilities afforded by the Library of Congress and the libraries of Government Departments; the privilege of observing at close range sessions of the United States Supreme Court, the United States Senate and the House of Representatives; the opportunity of obtaining almost without effort an abundance of factual data which is constantly being assembled by the numerous agencies of the Federal Government.

The University is served by excellent transportation facilities, including the main line of the Baltimore and Ohio Railroad, by the Washington street car system, and by several bus lines. The campus fronts on the Baltimore-Washington Boulevard, a section of Federal Route No. 1, which makes the University easily accessible by private automobile travel.

College Park, and the adjacent Calvert Hills and College Heights, constitute a group of fine residential communities close to the University campus, where are located the homes of many of the members of the faculty and staff, and where students who prefer to live off campus may find desirable living accommodations at reasonable rates.

Baltimore

The professional schools of the University—Dentistry, Law, Medicine, Nursing, and Pharmacy—the University Hospital, and the Baltimore Division of the College of Education, are located in a group of splendid buildings, most of them erected in recent years, at or near the adjacent corners of Lombard and Greene Streets and Lombard and Redwood Streets, Baltimore, Maryland.

Baltimore, a thriving, modern industrial city of more than a million inhabitants, has an old established culture represented by outstanding educational institutions, libraries, museums, parks, public buildings, and places of historical interest.

Baltimore is justly proud of its well earned reputation as a center of the highest type of professional education, and no finer location could be chosen by a young man or young woman desiring to prepare for a professional career.

BRIEF HISTORY OF THE UNIVERSITY

While its advancement in recent years, both in the matter of physical plant facilities and educational standards has been especially rapid, the University has behind it a long and honorable history.

The history of the present University is the history of two institutions; the old privately-owned and operated University of Maryland in Baltimore and the Maryland State College (formerly Maryland Agricultural College) at College Park. These institutions were merged in 1920.

In 1807 the College of Medicine of Maryland was organized, the fifth medical school in the United States. The first class was graduated in 1810 A permanent home was established in 1814-1815 by the erection of the building at Lombard and Greene Streets in Baltimore, the oldest structure in America devoted to medical teaching. Here was founded one of the first medical libraries (and the first medical school library) in the United States. In 1812 the General Assembly of Maryland authorized the College of Medicine of Maryland to "annex or constitute faculties of divinity, law, and arts and sciences," and by the same act declared that the "colleges or faculties thus united should be constituted an university by the name and under the title of the University of Maryland." By authority of this act, steps were taken in 1813 to establish "a faculty of law," and in 1823 a regular school of instruction in law was opened. Subsequently there were added: in 1882 a Department of Dentistry which was absorbed in 1923 by the Baltimore College of Dental Surgery (founded in 1840, the first dental school in the world); in 1889 a School of Nursing; and in 1904 the Maryland College of Pharmacy (founded in 1841, the third oldest pharmacy college in the United States).

The Maryland State College was chartered in 1856 under the name of the Maryland Agricultural College, the second agricultural college in the Western Hemisphere. For three years the College was under private management. In 1862 the Congress of the United States passed the Land Grant Act. This act granted each State and Territory that should claim its benefits a proportionate amount of unclaimed western lands, in place of scrip, the proceeds from the sale of which should apply under certain conditions to the "endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such a manner as the Legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." This grant was accepted by the General Assembly of Maryland, and the Maryland Agricultural College was named as the beneficiary of the grant. Thus the College became, at least in part, a State institution. In the fall of 1914 control was taken over entirely by the State. In 1916 the General Assembly granted a new charter to the College, and made it the Maryland State College.

In 1920, by an act of the State Legislature, the University of Maryland was merged with the Maryland State College, and the resultant institution was given the name, University of Maryland.

THE UNIVERSITY YEAR

The University year is divided into two semesters of approximately seventeen weeks each, and a summer session of six weeks.

ADMINISTRATIVE ORGANIZATION OF THE UNIVERSITY

The government of the University is, by law, vested in a Board of Regents, consisting of eleven members appointed by the governor of the State, each for a term of nine years. The administration of the University is vested in the president. The deans, directors and other principal officers of the University form the Administrative Board. This group serves in an advisory capacity to the president.

Following is a list of the administrative divisions of the University:

At College Park

College of Agriculture
College of Arts and Sciences
College of Business and Public Administration
College of Education
College of Engineering
College of Home Economics
Graduate School
Summer Session
Department of Military Science and Tactics

At Baltimore

School of Dentistry
School of Law
School of Medicine
School of Nursing
School of Pharmacy
University Hospital
College of Education (Baltimore Division)
Maryland State Board of Agriculture

Agricultural Experiment Station
Agricultural and Home Economics Extension Service

State-Wide Activities

The Agricultural and Home Economics Extension Service maintains local representatives in every county of the State. These representatives, County Agents and Home Demonstration Agents provide expert assistance to farmers and farm families in their areas and, when necessary, call upon the large staff of specialists at the headquarters of the Extension Service at College Park.

The Live Stock Sanitary Service, which is charged with responsibility for the control and eradication of diseases of live stock and poultry, maintains local veterinary inspectors throughout the State, in addition to specialists and laboratory technicians at the main laboratory at College Park and the branch laboratories in Salisbury, Centerville and Baltimore.

PHYSICAL FACILITIES — GROUNDS, BUILDINGS AND EQUIPMENT

College Park

Grounds. The University grounds at College Park comprise 600 acres. A broad rolling campus is surmounted by a commanding hill which overlooks a wide area and insures excellent drainage. Most of the buildings are located on this eminence, and the adjacent grounds are laid out attractively in lawns and terraces ornamented with shrubbery and flower beds. Below the brow of the hill, on either side of the Washington-Baltimore Boulevard, lie the drill grounds and the athletic fields.

Approximately 300 acres are used for research and teaching in horticulture, agriculture, dairying, livestock, and poultry; and an additional 500 acres for plant research work are located on a farm five miles northwest of the campus.

Buildings. The buildings comprise about 30 individual structures, which provide facilities for the several activities and services carried on at College Park.

Administration and Instruction. This group consists of the following buildings: *Administration Building,* which accommodates the Office of the President, Dean of Men, Comptroller, Registrar, Director of Admissions, Director of Athletics, and Alumni Secretary; *Agriculture Building,* which houses the College of Agriculture, Agricultural and Home Economics Extension Service and Auditorium; *Arts and Sciences Building, Engineering Building, Morrill Hall,* which houses a portion of the work in the Sciences; *Poultry Building; Horticulture Building; Dairy Building; Dean of Women's Building,* in which are the offices of the Dean of Women and her staff; *Music Building,* which provides accommodations for the Department of Music, the student band, and glee club; *Home Economics Building; Chemistry Building,* in which are located laboratories and classrooms for instruction in chemistry, and laboratories for analysis of feeds, fertilizers, and lime; and *College of Education Building.* A new *Shop Building* has just been completed.

Experiment Station. The headquarters for the Agricultural Experiment Station are in the Agriculture Building. The laboratories and green houses for this work are located in various buildings on the campus.

Physical Education. This group consists of *the Ritchie Coliseum,* which provides quarters for all athletic teams, an athletic office, trophy room, and visiting team rooms, together with a playing floor and permanent seating arrangements for 4,262 persons; *Byrd Stadium,* with a permanent seating capacity of 8,000, is furnished with rest rooms for patrons, dressing rooms, and equipment for receiving and transmitting information concerning contests in progress; *Gymnasium-Armory,* used for physical education work for women and the *Girls' Field House,* for all girls' sports. Playing and practice fields and tennis courts are adjacent to the field houses.

Armory. A new Armory, considered one of the finest structures of its kind in the nation, is modern in every respect. It houses the Department of Military Science and Tactics and the Men's Physical Education Department.

Dormitories. The men's dormitory group, consisting of nine buildings, of brick, fireproof construction, provides accommodations for 860 men students. The women's residence group consists of two modern dormitories of Colonial architecture, accommodating 228 women students. These are designated as Margaret Brent Hall and Anne Arundel Hall.

Rossborough Inn. This historic Inn, built in 1798, is the oldest building on the campus and for many years housed the Agricultural Experiment Station. Entirely restored, this is now one of the most beautiful and interesting buildings on the campus.

Service Structures. This group includes the *Central Heating Plant; Plant Maintenance and Operations Building; Infirmary,* with accommodations for forty patients, physician's office, operating room, and nurses' quarters; and *Dining Hall.*

United States Bureau of Mines. The Eastern Experiment Station of the United States Bureau of Mines is located on the University grounds. The general laboratories are used for instruction purposes in Engineering as well as the United States Government for Experimental work. The building contains a geological museum, and a technical library.

United States Fish and Wildlife Service Laboratory. The technological research laboratory of the U. S. Fish and Wildlife Service is located on the University campus. It contains laboratories for conduct of research in the fisheries dealing with chemical, chemical engineering, bacteriological, nutritional, and biological subjects. Through a cooperative arrangement with the University it is possible for students, who have undergraduate degrees, to pursue studies toward graduate degrees in any of the subjects mentioned above.

Baltimore

The group of buildings, located in the vicinity of Lombard and Greene Streets, provides available housing for the Baltimore division of the University. The group comprises the original *Medical School Building,* erected in 1814; the *Old Hospital,* now used as a dispensary; the *New University Hospital* with approximately 450 beds; the *Frank C. Bressler Research Laboratory;* the *Dental and Pharmacy Building;* the *Nurses' Home;* the *Law School Building; Davidge Hall,* which houses the Medical library; and the *Administration Building.*

LIBRARY FACILITIES

Libraries are located at both the College Park and Baltimore divisions of the University.

The General Library at College Park, completed in 1931, is an attractive and well-equipped structure. The main reading room on the second floor seats 236, and has about 5,000 reference books and bound periodicals on open shelves. The five-tier stack room is equipped with carrels and desks for the use of advanced students. About 10,000 of the 125,000 volumes on the campus are shelved in the Chemistry and Entomology departments, the Graduate School, and other units. Over 900 periodicals are currently received.

Facilities in Baltimore consist of the Libraries of the School of Dentistry, containing some 12,000; the School of Law, 19,500 volumes; the School of Medicine, 25,000 volumes; and the School of Pharmacy, 10,500 volumes. The Medical Library is housed in Davidge Hall; the remaining three libraries have adequate quarters in the buildings of their respective schools, where they are readily available for use. Facilities for the courses in Arts and Sciences are offered jointly by the Libraries of the Schools of Dentistry and Pharmacy.

The libraries of the University total in the aggregate 192,000 bound volumes. The General Library is a depository for publications of the United States Government, and numbers some 15,000 documents in its collections.

The University Library System is able to supplement its reference service by borrowing material from other libraries through Inter-Library Loan or Bibliofilm Service, or by arranging for perosnal work in the Library of Congress, the United States Department of Agriculture Library, and other agencies in Washington.

ADMISSION PROCEDURE

Undergraduate Schools: Applicants for admission to the College of Agriculture, Arts and Sciences, Business and Public Administration, Education, Engineering, and Home Economics should communicate with the Director of Admissions, University of Maryland, College Park, Maryland.

Graduate School: Those seeking admission to the Graduate School should address the Dean of the Graduate School, University of Maryland, College Park.

Professional Schools: Information about admission to the professional schools in Baltimore may be had by writing to the dean of the college concerned or to the Director of Admissions of the University.

Applicants from Secondary Schools: Procure an application blank from the Director of Admissions. Fill in personal data requested and ask your principal or headmaster to enter your secondary school record and mail the blank to the Director of Admissions.

To avoid delay, it is suggested that applications be filed not later than July 1 for the fall semester, and January 1 for the spring semester. Applications from students completing their last semester of secondary work are encouraged. If acceptable, supplementary records will be sent upon graduation.

Applicants from Other Colleges and Universities: Secure an application blank from the Director of Admissions. Fill in personal data requested and ask secondary school principal or headmaster to enter secondary school record and send the blank to the Director of Admissions. Request the Registrar of the College or University attended to send a transcript to the Director of Admissions, College Park, Maryland.

Time of Admission: New students should plan to enter the University at the beginning of the fall semester if possible. Students, however, will be admitted at the beginning of either semester.

ADMISSION OF FRESHMEN

Admission by Certificate: Graduates of accredited secondary schools of Maryland or the District of Columbia will be admitted by certificate upon the recommendation of the principal. Graduates of out-of-state schools should have attained college certification marks, such marks to be not less than one letter or ten points higher than the passing mark.

Graduates who fail to obtain the principal's recommendation may be considered by the Committee on Admissions. Supplementary information, including aptitude tests will determine whether they are eligible for admission.

In selecting students more emphasis will be placed upon good marks and other indications of probable success in college than upon a fixed pattern of subject matter.

Veterans and other mature persons who are not high school graduates may qualify for admission to the freshman class by passing prescribed tests comparable to those employed by state authorities to establish high school equivalence.

SUBJECT REQUIREMENTS

English	4 units required for all divisions of the University.
Mathematics	3½ units, including Solid Geometry, required for Engineering, Mathematics, Physics and Chemistry. One unit each of Algebra and Plane Geometry is desirable for Arts and Sciences and Public and Business Administration. Deviation may be allowed for certain curricula and for other colleges of the University.
Social Science; Natural and Biological Science..	1 unit from each group is required; two are suggested.
Foreign Languages......	None is required. However, those who will follow the professions, enter journalism, foreign trade or service, study the humanities or do research, should have a good foundation in one or more.
Electives	Fine Arts, trade and vocational subjects are acceptable.

Transfer Students: Only students in good standing as to scholarship and conduct are eligible to transfer. Advanced standing is assigned to transfer students from accredited institutions under the following conditions:

1. A minimum of one year of resident work of not less than 30 semester hours is necessary for a degree.
2. The University reserves the right at any time to revoke advanced standing if the transfer student's progress is unsatisfactory.

Special Students: Applicants who are at least twenty-one years of age, and who have not completed the usual preparatory course, may be admitted to such courses as they seem fitted to take. Special students are ineligible to matriculate for a degree until entrance requirements have been satisfied.

Unclassified Students: Applicants who meet entrance requirements but who do not wish to pursue a program of study leading to a degree are eligible for admission to pursue courses for which they have met prerequisites.

PHYSICAL EDUCATION REQUIREMENTS FOR MEN AND WOMEN

All undergraduate students classified academically as freshmen or sophomores who are registered for more than six semester hours are required to carry physical activities three hours per week until they have successfully completed four semesters. Students not qualified to take the regular activities program will be given adaptive work suitable to their physical capacities.

REQUIREMENTS IN MILITARY INSTRUCTION

All male students unless specifically exempted under University rules are required to take basic military training for a period of two years. The successful completion of this course is a prerequisite for graduation but it must be taken by all eligible students during the first two years of attendance at the University, whether they intend to graduate or not. Transfer students who do not have the required two years of military training will be required to complete the course or take it until graduation, whichever occurs first.

EXEMPTIONS:

1. Students who are not citizens of the United States.

2. Students who have completed the course in other senior units of the R. O. T. C.

3. Students holding commissions in the Reserve Corps of the Army, Navy, Marines or Coast Guard.

4. Students who have served in the Army, Navy, Marine Corps, or Coast Guard for a period of time long enough to be considered equivalent to the training received in the R. O. T. C. Short periods of service in any of the branches named above will be evaluated and allowed as credit toward completion of the course.

5. Graduate students.

6. Students classified as "Special Students" who are registered for less than seven semester credits.

7. Students who have passed their thirtieth birthday before starting the course.

Students excused from basic military training are required to take an equivalent number of credits in other subjects, which substitution must be approved by the dean of the college concerned.

THE PROGRAM IN AMERICAN CIVILIZATION

Work in American Civilization is offered at three distinct academic levels. Work at the first level is described below. For a description of work at the second level, see "American Civilization," page 18; and for details concerning the graduate program, consult the bulletin of the Graduate School.

Required Courses in the American Civilization Program

All students (unless specific exceptions are noted in printed curricula) are required to take twelve semester hours of English (for sequence and descriptions, see the offerings of the Department of English), three semester hours of sociology (Soc. 1—Sociology of American Life), three semester hours of government (P. & G. 1—American Government), and six semester hours of history (H. 5, 6—History of American Civilization).

These several courses are planned as parts of a whole that is designed to acquaint students with the basic facts of American history, with the fundamental patterns of our social, economic, political, and intellectual development, and with the riches of our cultural heritage.

REGULATION OF STUDIES

Course Numbers. Courses for undergraduates are designated by numbers 1—99; courses for advanced undergraduates and graduates, by numbers 100—199*; and courses for graduates, by numbers 200—299.

A course with a single number extends through one semester. A course with a double number extends through two semesters.

Schedule of Courses. A semester time schedule of courses, giving days, hours, and rooms, is issued as a separate pamphlet at the beginning of each semester. Classes are scheduled beginning at 8:00 A. M.

Definition of Credit Unit. The semester hour, which is the unit of credit in the University, is the equivalent of a subject pursued one period a week for one semester. Two or three periods of laboratory or field work are equivalent to one lecture or recitation period. The student is expected to devote three hours a week in classroom or laboratory, including outside preparation for each credit hour in any course.

---

* But not all courses numbered 100 to 199 may be taken for graduate credit.

Examinations. Examinations are held at the end of each semester in accordance with the official schedule of examinations. Students are required to use the prescribed type of examination book in final examinations; and, also, when requested to do so by the instructor, in tests given during the semester.

Final examinations are held in all courses except in classes where the character of the work will permit the instructor to note frequently the progress and proficiency of the student—in which case they may be omitted upon approval of the head of the department and dean of the college. Periodic examinations and tests are given during regularly scheduled class periods. Final examinations, where required, are given according to schedule and are of not more than two hours' duration.

Final examinations for undergraduate candidates for degrees are waived in the semester immediately preceding their June graduation exercises, and final grades are based on daily grades and tests given during the semester.

Marking System: The following symbols are used for marks: A, B, C, and D, passing; F, Failure; I, Incomplete.

Mark A denotes superior scholarship; mark B, good scholarship; mark C, fair scholarship; and mark D, passing scholarship.

In computing scholastic averages, numerical values are assigned as follows: A—4; B—3; C—2; D—1; F—0.

A scholastic average of C is required for graduation and for junior standing. At least three-fourths of the credits required for graduation must be earned with marks of A, B, or C. A student who receives the mark of D in more than one-fourth of his credits must take additional courses or repeat courses until he has met these requirements.

Academic Regulations. A separate pamphlet is published each year listing the regulations which govern the academic work and other activtities of students.

REPORTS

Written reports of grades are sent by the Registrar to parents or guardians at the close of each semester.

DELINQUENT STUDENTS

A student must attain passing marks in fifty per cent of the semester hours for which he is registered, or he is automatically dropped from the University. The Registrar notifies the student, his parent or guardian, and the student's dean of this action. A student who has been dropped for scholastic reasons may appeal in writing to the Committee on Admission, Guidance, and Adjustment for reinstatement. The Committee is empowered to grant relief for just cause. A student who has been dropped from the University for scholastic reasons, and whose petition for reinstatement is denied, may again petition after a lapse of at least one semester.

The University reserves the right to request at any time the withdrawal of a student who cannot or does not maintain the required standard of scholarship, or whose continuance in the University would be detrimental to his or her health, or to the health of others, or whose conduct is not satisfactory to the authorities of the University. **Students of the last class may be asked to withdraw even though no specific charge be made against them.**

According to University regulations, excessive absence from any course is penalized by failure in that course. Students who are guilty of persistent absence from any course will be reported to the President or to his appointed representative for final disciplinary action.

JUNIOR STANDING

No student will be certified as a junior, or be permitted to select a major or minor, or to continue in a fixed curriculum until he or she shall have passed with an average grade as high as C (2.0) the minimum number of quarter credits required for junior standing in any curriculum.

DEGREES AND CERTIFICATES

The University confers the following degrees: Bachelor of Arts, Bachelor of Science, Master of Education, Master of Arts, Master of Science, Master of Business Administration, Doctor of Philosophy, Civil Engineer, Mechanical Engineer, Electrical Engineer, Chemical Engineer, Bachelor of Laws, Doctor of Medicine, Doctor of Dental Surgery, and Bachelor of Science in Pharmacy.

Students in the two-year and three-year curricula are awarded certificates.

No baccalaureate degree will be awarded to a student who has had less than one year of resident work in this University. The last thirty semester credits of any curriculum leading to a baccalaureate degree must be taken in residence at the University of Maryland. Candidates for the baccalaureate degree in combined curriculums at College Park and Baltimore must complete a minimum of thirty semester credits at College Park.

An average mark of C is required for graduation. In addition, at least three-fourths of the credits required for graduation must be earned with marks of A, B, or C. In the case of a candidate for a combined degree or of a transfer student with advanced standing, a grade of D will not be recognized for credit towards a degree in more than one-fourth of the credits earned at this institution.

The requirements for graduation vary according to the character of work in the different colleges and schools. Full information regarding specific college requirements for graduation will be found in the college sections of the catalog.

Each candidate for a degree must file in the office of the Registrar three months prior to the date he expects to graduate, a formal application for a degree. Candidates for degrees must attend a convocation at which degrees are conferred and diplomas are awarded. Degrees are conferred in *absentia* only in exceptional cases.

DEFINITION OF RESIDENCE AND NON-RESIDENCE

Students who are minors are considered to be resident students, if at the time of their registration their parents* have been residents of this State† for at least one year.

Adult students are considered to be resident students, if at the time of their registration they have been residents of this State† for at least one year; provided such residence has not been acquired while attending any school or college in Maryland.

The status of the residence of a student is determined at the time of his first registration in the University, and may not thereafter be changed by him unless, in the case of a minor, his parents* move to and become legal residents of this State†, by maintaining such residence for at least one full calendar year. However, the right of the student (minor) to change from a non-resident to a resident status must be established by him prior to registration for a semester in any academic year.

FEES AND EXPENSES

General

All checks or money orders should be made payable to the University of Maryland for the exact amount of the charges.

In cases where students have been awarded Legislative Scholarships or University Grants, the amount of such scholarship or grant will be deducted from the bill.

All fees are due and payable at the time of registration, and students should come prepared to pay the full amount of the charges. No student will be admitted to classes until such payment has been made.

The University reserves the right to make such changes in fees and other charges as may be found necessary, although every effort will be made to keep the costs to the student as low as possible.

No degree will be conferred, nor any diploma, certificate, or transcript of a record issued to a student who has not made satisfactory settlement of his account.

The University will award to all World War II Veteran Students approved by the Veterans Administration for the educational benefits under Public Law 16 or 346, a scholarship whenever the total charges excluding room and board, but including textbooks and supplies, exceeds the amounts payable to the University by the Federal Government. The amount of such scholarship shall be the difference between such total charges as above defined and the amount payable by the Veterans Administration during the veteran student's period of eligibility.

---

* The term "parents" includes persons who, by reason of death or other unusual circumstances, have been legally constituted the guardians of and stand in *loco parentis* to such minor students.

Fees for Undergraduate Students

Maryland Residents	First Semester	Second Semester	Total
Fixed Charges	$67.00	$78.00	$145.00
Athletic Fees	15.00	....	15.00
Special Fees	10.00	....	10.00
Student Activities Fees	10.00	....	10.00
Infirmary Fees	5.00	....	5.00
Post Office Fees	2.00	....	2.00
Advisory and Testing Fee	1.00	....	1.00
Total for Maryland Residents	$110.00	$78.00	$188.00
District of Columbia Residents			
Non-Resident Fee for students from District of Columbia in addition to fees shown above	$25.00	$25.00	$50.00
Total for District of Columbia Students	$135.00	*$103.00	$238.00
Residents of Other States and Countries			
Non-Resident Fee for students from other states and countries in addition to fees shown above	$62.50	$62.50	$125.00
Total for Non-Resident Students	$172.50	*$140.50	$313.00
Board and Lodging			
Board	$170.00	$170.00	$340.00
Dormitory Room	$40—$45	$40—$45	$80—$90
Total for Board and Room	$210—215	$210—215	$420—430

The Special Fee is used for improving physical training facilities and for other University projects that have direct relationship to student welfare, especially athletics and recreation. This fee now is devoted to a fund for construction of a stadium, an addition to the coliseum, and a swimming pool, as soon as the fund is sufficient and materials are available.

The Students Activities Fee is included at the request of the Student Government Association. Its payment is not mandatory, but it is really a matter of economy to the student, since, in normal times, it covers subscription to the student newspaper, the magazine and the yearbook; class dues, including admission to class dances and to the performances of the musical and dramatic clubs.

* Students entering the University for the second semester will pay the following additional fees: Athletic, $7.50; Special, $5.00; Student Activities, $8.00; Infirmary, $2.50; Post Office Fees, $1.00.

Special Fees

Matriculation Fee for undergraduates, payable at time of first registration in the University	$10.00
Diploma Fee for Bachelor's degree, payable just prior to graduation	10.00
Engineering College Fee, Per Semester	3.00
Home Economics Education Fee, Per Semester	10.00
Special Fee for students enrolled in Pre-Medical, Pre-Dental, or Pre-Veterinarian courses (Per Semester in Addition to Fees Shown Above):	
For Residents of Maryland	25.00
For Residents of the District of Columbia	25.00
For Residents of other states or countries	62.50

Students who register in colleges or departments, other than Pre-Dental and Pre-Medical, but who take sufficient Pre-Dental or Pre-Medical work to enable them to qualify for admission to Dental School or Medical School, will not be so certified until all Pre-Dental and Pre-Medical fees, charged those who registered as Pre-Dental or Pre-Medical students, have been paid.

Laboratory Fees Per Semester Course

Bacteriology	$8.00	Education	1.00
Botany	5.00	Industrial Education	3.00
Chemical Engineering	8.00	Physics	
Chemistry		Introductory	3.00
Introductory	4.00	All Other	6.00
All Other	8.00	Psychology (Psych. 172, 173, 174)	4.00
Dairy	3.00	Radio Speech	2.00
Home Economics (Non-Home Students)		Secretarial Training	7.50
Art Textiles and Clothing	3.00	Zoology	
		Introductory	3.00
		All Other	6.00
Foods and Practice House (each)	7.00	Entomology	3.00

Miscellaneous Fees and Charges

Fee for part-time students per credit hour.......................... 6.00

(The term "part-time students" is interpreted to mean undergraduate students taking 6 semester credit hours or less. Students carrying more than 6 semester hours pay the regular fees.)

Late Registration Fee....................................3.00 to 5.00

(All students are expected to complete their registration, including the filing of class cards and payment of bills, on the regular registration days. Those who complete their registration one day late will be charged a fee of $3.00, and those who are more than one day late will be charged $5.00).

Fee for change in registration after first week of instructions	1.00
Fee for failure to report for medical examination appointment	2.00
Special Examination Fee—to establish college credit—per semester hour	$5.00
Makeup Examination Fee—(for students who are absent during any class period when tests or examinations are given)	1.00
Transcript of Record Fee	1.00

Property Damage Charge—Students will be charged for damage to property or equipment. Where responsibility for the damage can be fixed, the individual student will be billed for it; where responsibility cannot be fixed, the cost of repairing the damage or replacing equipment will be pro-rated.

Library Charges:

Fine for failure to return book from general library before expiration of loan period	.05 per day
Fine for failure to return book from Reserve Shelf before expiration of loan period—	
First hour overdue	.25
Each additional hour overdue	.05

In case of loss or mutilation of a book, satisfactory restitution must be made.

Text books and classroom supplies—These costs vary with the course pursued, but will average per semester	30.00

Fees for Graduate Students

Tuition charge for students carrying more than 8 semester credit hours	50.00
Tuition charge per semester hour for students carrying 8 semester credit hours or less	6.00
Matriculation Fee, payable only once, at time of first registration	10.00
Diploma Fee (For Master's Degree)	10.00
Graduation Fee (For Doctor's Degree)	25.00

Notes: Fees in the Graduate School are the same for all students, whether residents of the State of Maryland or not.

All fees, except Diploma Fee and Graduation Fee, are payable at the time of registration for each semester.

Diploma Fee and Graduation Fee must be paid prior to graduation.

Fees for Evening Courses

Matriculation Fee (Payable once, at time of first registration by all students—full time and part time; candidates for degrees, and non-candidates.)

For Undergraduates	10.00
For Graduates	10.00
Tuition Charge (same for all students)—Limit six hours, per credit hour	$6.00

Laboratory Fees—A laboratory fee, to cover cost of materials used, is charged in laboratory courses. These fees vary with the course and can be ascertained in any case by inquiry of the Director of Evening Courses, or the instructor in charge of the course.

WITHDRAWAL AND REFUND OF FEES

Any student compelled to leave the University at any time during the academic year, should file an application for withdrawal, bearing the proper signatures, in the office of the Registrar. If this is not done, the student will not be entitled, as a matter of course, to a certificate of honorable dismissal, and will forfeit his right to any refund to which he would otherwise be entitled. The date used in computing refunds is the date the application for withdrawal is filed in the office of the Registrar.

In the case of a minor, withdrawal will be permitted only with the written consent of the student's parent or guardian.

Students withdrawing from the University within five days after the beginning of instruction for the semester are granted a full refund of all charges except the matriculation fee, board and lodging, with a deduction of $5.00 to cover cost of registration. Board and lodging are refunded on a pro-rata basis.

Students withdrawing from the University after five days and until November 1, the first semester, or March 15, the second semester, will receive a pro-rata refund of all charges, less the matriculation fee and a deduction of $5.00 to cover cost of registration. After November 1, the first semester, or March 15, the second semester, refunds will be made only for board. The refund for this item will be on a pro-rata basis.

No refunds of laboratory fees will be made in the first semester after October 15 and in the second semester after March 1.

TRANSCRIPTS OF RECORDS

Any student or alumnus may secure a transcript of his scholastic record from the Registrar. No charge is made for the first copy, but, for each additional copy, there is a charge of $1.00.

Transcripts of records are of two kinds:

(a) Informal transcripts which may be obtained by the student or alumnus for such personal use as he may wish; and

(b) Official transcripts, bearing the University seal which are forwarded, on request, to educational institutions, Government agencies, etc., as attested evidence of the student's record at the University and his honorable dismissal therefrom.

Persons desiring transcripts of records should make request of the Registrar at least one week in advance of the date when the records are actually needed.

No transcript of a student's record will be furnished in the case of any student or alumnus whose financial obligations to the University have not been satisfied.

STUDENT HEALTH

The University recognizes its responsibility for safeguarding the health of its student body and takes every reasonable precaution towards this end. All new students will be given a thorough physical examination at the time of their entrance to the University. A medical history of any unusual nature from the family physician will be helpful. A modern, well-equipped infirmary, attended by a resident physician and staff, is available for the care of sick or injured students. A small fee is charged undergraduate students for this infirmary service.

Infirmary Service

1. All undergraduate students may receive dispensary service and medical advice at the Infirmary during regular office hours established by the physician in charge and published in Academic Rules and Regulations.

2. A registered nurse is on duty at all hours in the Infirmary. Students are requested to report illnesses during office hours unless the case is an emergency.

3. Students not residing in their own homes may, upon order of the University physician, be cared for in the Infirmary to the extent of the facilities available. Students living off the campus will be charged a subsistence fee of $1.25 per day.

4. In case of illness requiring a special nurse or special medical attention, the expense must be borne by the student.

5. Students living in the dormitories, fraternity, sorority, or "off-campus" houses who are ill and unable to attend classes must report to the Infirmary between 8:00 and 9:00 A. M. If they are too ill to go to the Infirmary, they must notify the house mother who in turn will notify the Infirmary so that a physician may visit the residence.

6. When a student is admitted to the Infirmary, parents are notified by mail of such admissions and for what reason. It is remembered, however, that entrance to the Infirmary does not necessarily mean serious illness, for the greater part of admissions are due to minor illnesses. If the illness is of a serious nature, parents will be informed by electronic means of the admission and of the progress of the student's condition.

7. Hospitalization is not available at the Infirmary for graduate students and employees. Dispensary service, however, is available for graduate students and employees who are injured in University service or University activities.

Public Health

All dormitories, approved "off-campus" houses, sorority and fraternity houses are inspected periodically by the Student Health Service to insure that proper sanitary conditions are maintained and that kitchens meet the prescribed standards for cleanliness and sanitation. All food handlers will be examined in accordance with directive issued by the Student Health Service.

LIVING ARRANGEMENTS

Dormitories

Room Reservations. All new students desiring to room in the dormitories should request room application cards by carefully checking the admission blanks. The Director of Admissions will refer these to the offices of the Dean of Men and Dean of Women respectively. Application cards or blanks will be sent to applicants and should be returned promptly. A fee of $15.00 will be requested which will be deducted from the first quarter charges when the student registers. Room reservations not claimed by freshmen or upper-classmen on their respective registration days will be cancelled. A room will be held by special request until after classes begin providing the dormitory office is notified by the first day of registration. Room reservation fees will not be refunded if the request is received later than one month before the first day of registration for the semester for which arrangements were made.

Reservations by students in attendance at the University should be made at least two weeks before the close of the preceding semester. New students are urged to attend to their housing arrangements about three months in advance of registration.

It is understood that all housing arrangements which are made for the fall semester are binding for the spring semester. Room and board charges begin with the evening meal prior to the first day of registration and include the last day of classes for each semester with the exception of the Christmas recess and the Easter recess. Students unable to make other arrangements for the holidays may consult with the Dean of Men or the Dean of Women for assistance.

All freshmen except those who live at home, are required to room in the dormitories when accommodations are available.

Applications for rooms are considered only when a student has been fully admitted academically to the University.

Equipment

Students assigned to dormitories should provide themselves with sufficient single blankets, at least two pairs of sheets, a pillow, pillow cases, towels, a laundry bag, and a waste paper basket.

The individual student must assume responsibility for all dormitory property assigned to him. Any damage done to the property other than that which would result from ordinary wear and tear will be charged to the student concerned.

Each student will be furnished a key for his room for which a deposit of $1.00 will be made. This deposit will be returned in exchange for the key at the end of the year.

Laundry. The University does not provide laundry service and each student is responsible for his or her own laundry. There are several reliable laundry concerns in College Park; or if a student prefers, he may send his laundry home. Women students may, if they wish, do their own laundry in the laundry room in each dormitory, not including bed linen.

Personal baggage sent via the American Express and marked with a dormitory address will be delivered when the student concerned notifies the College Park express office of his arrival.

VETERANS' HOUSING

A Veterans' Housing project has been established on the campus in co-operation with the Federal Government. This project will be governed by regulations established in accordance with Federal directives.

OFF-CAMPUS HOUSES

Men: Only upper classmen and freshmen who cannot be accommodated are allowed to live in houses off the campus.

Women: All housing arrangements for women students must be approved by the Office of the Dean of Women.

Undergraduate women students who cannot be accommodated in the women's dormitories are referred to private homes which are registered in the Office of the Dean of Women as "Off-Campus Houses for Undergraduate Women." The householders in these homes agree to maintain the same rules and regulations as in the dormitories but business arrangements are made entirely between the student and the householder. Students and their parents should plan to see these accommodations personally and talk with the householder before making final arrangements. No woman student should enter into an agreement with a householder without first ascertaining at the Office of the Dean of Women that the house is on the approved list.

Meals

All students who live in University dormitories must board at the University Dining Hall.

Students not living in the dormitories may make arrangements to board by the semester at the Dining Hall, or at eating establishments in College Park. A few "off-campus" houses provide board as well as room.

Estimated Expenses of "Off-Campus" Residence

Most of these houses have only double rooms with twin beds. The student provides her own linens as in the dormitory. Price per person for room is about $15.00 a month, all rooms being registered with the room control board.

No rebate is made for meals not eaten at the University Dining Hall or in other places where board is paid in advance. Therefore, with care, students may save enough money on their meals to make up for the difference in rent between the off-campus houses and the dormitory. Some even find this less expensive.

Girls may find desirable rooms in good homes where they can earn their room and board by applying to the Office of the Dean of Women.

OFFICE OF THE DEAN OF WOMEN

The Office of the Dean of Women exists for the purpose of furnishing friendly counsel and helpful guidance to women students in connection with any of their personal problems, especially those relating to financial need, employment, housing, etc. In addition, it coordinates the interests of women students, handles matters of chaperonage at social functions, regulation of sorority rushing in cooperation with Panhellenic Association, and so forth. It has supervision over all housing accommodations for women students, whether on or off campus. A personal interview with one of the Deans of Women is required of every woman student on entering and on leaving the University. Any woman student is invited to avail herself of all of the services of this department.

OFFICE OF THE DEAN OF MEN

The Office of the Dean of Men exists for the purpose of furnishing friendly counsel and helpful guidance to male students in connection with any of their personal problems, especially those relating to financial need, employment, housing, etc. This office also handles for male students matters of discipline and infringement of University regulations.

ADDITIONAL PERSONNEL SERVICES

The above services are closely coordinated with the activities of the Psychological Testing Bureau which also provides academic and vocational counseling. Remedial work in reading and in speech are available through the College of Education and the Department of Speech respectively. All of the above services are available to the student without fee.

STUDENT AID

Legislative Scholarships

By Act of the Maryland Legislature in 1941, members of the Legislature were given the privilege of awarding scholarships to worthy students from their respective districts.

Students desiring these scholarships are requested to contact either a State Senator or a member of the House of Delegates in their respective districts.

University Scholarships

The University of Maryland offers a limited number of scholarships covering fixed charges to graduates of high schools or preparatory schools. Inquiries should be addressed to the Secretary of the Scholarship Committee.

Home Economics Scholarships

Two thousand dollars has been made available for home economics scholarships during 1946-47 by Marie Mount.

The Hecht Company of Washington has established one scholarship, worth three hundred dollars, to a resident of Maryland who has completed satisfactorily the first three years of the Practical Art curriculum in the College of Home Economics under certain provisions as to scholarship, etc.

Certain Baltimore merchants through the Retail Merchants Association of Baltimore have provided two scholarships worth three hundred dollars each for the same purpose and under similar conditions.

Albright Scholarship

A scholarship, known as the Victor E. Albright Scholarship, is open to graduates of Garrett County High Schools who were born and reared in that county. Application should be made to the high school principals.

Sears Roebuck Agricultural Foundation Grants

A limited number of scholarships have been made available by the Sears Roebuck Agricultural Foundation for young men who have been reared on farms in the State of Maryland and who enroll as freshmen in the College of Agriculture. These grants apply only in the freshman year.

Applications may be obtained from H. F. Cotterman, Assistant Dean of the College of Agriculture.

The Danforth Foundation and the Ralston Purina Scholarship

The Danforth Foundation and the Ralston Purina Company of St. Louis offer two Summer Fellowships to outstanding Home Economics Juniors and to outstanding Freshmen in certain colleges and universities in the United States. The purpose of this fellowship is to bring together outstanding young women for leadership training.

Borden Home Economics and Agricultural Scholarships

Three hundred dollars is given by the Borden Company to the home economics student, who, upon entering her senior year, has completed two or more courses in food and nutrition and has the highest scholastic standing and other requirements of eligible students.

A Borden Agricultural Scholarship of $300 is granted to that student in the College of Agriculture who has had two or more of the regularly listed courses in dairying and, who, upon entering the senior year of study, has achieved the highest average grade and other requirements of all other similar eligible students in all preceding college work.

The above Scholarships are granted by the Borden Company of New York City.

William Randolph Hearst Scholarship and Fellowship

This scholarship and fellowship have been established through a gift of the Baltimore News-Post, one of the Hearst newspapers, in honor of William Randolph Hearst. The scholarship, worth $400 annually, is open to the graduate of any high school in America. The fellowship, worth $600 annually, is open to the graduate of any college or university in America.

Edward L. Israel Inter-faith Scholarship

The sum of $300 is given to the student, who, upon entering the senior year, is adjudged to have contributed most to fostering inter-faith understanding and relations. This Scholarship is in honor of the late Edward L. Israel and is sponsored by the National Hillel Foundation. The funds are given by the B'nai B'rith Federation of Maryland and the District of Columbia.

Helen Aletta Linthicum Scholarships

These scholarships, several in number, have been established through the benefaction of the late Mrs. Helen Aletta Linthicum, widow of the late Congressman Charles J. Linthicum who served in Congress from the Fourth District of Maryland for many years. One of these scholarships will have a value of $400 annually, the other four will have a value of $150 each annually. These scholarships are known as the Helen Aletta Linthicum Scholarships.

Graduate Fellowships

For information concerning Graduate Fellowships, see Graduate School.

STUDENT LOAN FUNDS

The Kappa Kappa Gamma Sorority Loan. Annually a Sigma Delta loan of one hundred dollars, without interest, is made to a woman student registered in the University of Maryland. Application should be made to the Dean of the College in which the student is registered.

A. A. U. W. Loan. The College Park Branch of the American Association of University Women maintains a fund from which loans are made to women students of junior or senior standing who have been in attendance at the University of Maryland for at least one year. Application blanks may be obtained through the Office of the Dean of Women.

Catherine Moore Brinkley Loan Fund. Under the provisions of the will of Catherine Moore Brinkley, a loan fund has been established, available for worthy students who are natives and residents of the State of Maryland, studying mechanical engineering or agriculture at the University of Maryland. Details concerning loans and application for loans should be made to the Secretary of the Scholarship Committee.

Home Economics Loan Fund. A loan fund, established by the District of Columbia Home Economics Association, is available for students majoring in home ecenomics.

From time to time other funds are made available by various women's organizations in the State of Maryland. Information regarding these may be secured upon request from the Office of the Dean of Women.

STUDENT EMPLOYMENT

A considerable number of students earn some money through employment while in attendance at the University. No student should expect, however, to earn enough to pay all of his expenses. The amounts vary, but some earn from one-fourth to three-fourths of all the required funds.

Generally the first year is the hardest for those desiring employment. After one has demonstrated that he is worthy and capable, there is much less difficulty in finding work.

The University assumes no responsibility in connection with employment. It does, however, make every effort to aid needy students. The nearby towns and the University are canvassed, and a list of available positions is placed at the disposal of students. Applications for employment should be made to the Dean of Men.

HONORS AND AWARDS

Scholarship Honors. Final honors for excellence in scholarship are awarded to one-fifth of the graduating class in each college. *First honors* are awarded to the upper half of this group; *second honors* to the lower half. To be eligible for honors, at least two years of resident work must be completed.

The Goddard Medal. The James Douglas Goddard Memorial Medal is awarded annually to the resident of Prince Georges County, born therein, who makes the highest average in his studies and who at the same time embodies the most manly attributes. The medal is given by Mrs. Anne K. Goddard James, of Washington, D. C.

Sigma Chi Medal. Sigma Chi Fraternity offers annually a gold medal to the man in the freshman class who makes the highest scholastic average during the first semester.

Alpha Zeta Medal. The Honorary Agricultural Fraternity of Alpha Zeta awards annually a medal to the agricultural student in the freshman class who attains the highest average record in academic work. The mere presentation of the medal does not elect the student to the fraternity, but simply indicates recognition of high scholarship.

Dinah Berman Memorial Medal. The Dinah Berman Memorial Medal is awarded annually to the sophomore who has attained the highest scholastic average of his class in the College of Engineering. The medal is given by Benjamin Berman.

Mortar Board Scholarship Cup. This is awarded to the senior girl who has been at the University for four years, and who has made the highest scholastic average for three and one-half years.

Delta Delta Delta Medal. This sorority awards a medal annually to the girl who attains the highest average in academic work during the sophomore year.

Class of '26 Honor Key. The Class of 1926 of the School of Business Administration of the University of Maryland at Baltimore offers each year a gold key to the senior graduating from the College of Business and Public Administration with the highest average for the entire four year course taken at the University of Maryland.

American Institute of Chemists Medal. The American Institute of Chemists awards annually a medal and a junior membership to the graduating student of good character and personality, majoring in chemistry, who has attained the highest average grade in this major subject for the entire undergraduate course, exclusive of credit received for the final semester.

Omicron Nu Sorority Medal. This sorority awards a medal annually to the freshman girl in the College of Home Economics who attains the highest scholastic average during the first semester.

Bernard L. Crozier Award. The Maryland Association of Engineers awards a cash prize of $25.00 annually to the senior in the College of Engineering who, in the opinion of the faculty, has made the greatest improvement in scholarship during his stay at the University.

Alpha Lambda Delta Award. The Alpha Lambda Delta Award is given to the senior member of the group who has maintained the highest average for the past three and one-half years. She must have been in attendance in the institution for the entire time.

American Society of Civil Engineers Award. The Maryland Section of the American Society of Civil Engineers awards annually a junior membership in the American Society of Civil Engineers to the senior in the Department of Civil Engineering who, in the opinion of the faculty of the Department, is the outstanding student in his class.

Tau Beta Pi Certificate of Merit. The Maryland Beta Chapter of Tau Beta Pi awards annually a certificate of merit to the initiate of the Chapter who, in the opinion of the members, has presented the best thesis during the year.

The Charles B. Hale Dramatic Awards. The Footlight Club recognizes annually the man and woman members of the senior class who have done most for the advancement of dramatics at the University.

Sigma Alpha Omicron Award. This is awarded to the senior student majoring in Bacteriology for high scholarship, character and leadership.

CITIZENSHIP AWARDS

Citizenship Prize for Men. An award is presented annually by President H. C. Byrd, a graduate of the Class of 1908, to the member of the senior class who, during his collegiate career, has most nearly typified the model citizen, and has done most for the general advancement of the interests of the University.

Citizenship Prize for Women. The Citizenship Prize is offered by Mrs. Albert F. Woods, wife of a former president of the University of Maryland, to the woman member of the senior class who, during her collegiate career, has most nearly typified the model citizen, and has done most for the general advancement of the interests of the University.

MILITARY AWARDS

Mahlon N. Haines '94 Trophy. This is offered to the major of the winning battalion.

Military Department Award. Gold second lieutenant's insignia to the major of the winning battalion.

The Governor's Cup. This is offered each year by His Excellency, the Governor of Maryland, to the best drilled company.

Company Award. The Reserve Officers' Association, Montgomery County Chapter, awards annually to the captain of the best drilled company of the University, gold second lieutenant's insignia.

The Alumni Cup. The Alumni offer each year a cup to the commanding officer of the best drilled platoon.

Scabbard and Blade Cup. This cup is offered to the commander of the winning platoon.

Class of '99 Gold Medal. The class of 1899 offers each year a gold medal to the member of the battalion who proves himself the best drilled soldier.

The Meeks Trophy is awarded to the member of the varsity R. O. T. C. Rifle Team who fired the high score of each season.

A Gold Medal is awarded to the members of the Freshman Rifle Team who fired the high score of each season.

Pershing Rifle Medals are awarded to each member of the winning squad in the squad drill competition.

Pershing Rifle Medals are awarded to the three best drilled students in Pershing Rifles.

Mehring Trophy Rifle Competition. A Gold Medal is awarded to the student firing highest score in this competition. A Silver Medal is given to the student showing greatest improvement during the year in this competition.

ATHLETIC AWARDS

Silvester Watch for Excellence in Athletics. A gold watch is offered annually to "the man who typified the best in college athletics." The watch is given in honor of a former President of the University, R. W. Silvester.

Maryland Ring. The Maryland Ring is offered by Charles L. Linhardt to the Maryland man who is adjudged the best athlete of the year.

Edward Powell Trophy. This trophy is offered by the class of 1913 to the player who has rendered the greatest service to lacrosse during the year.

Louis W. Berger Trophy. This trophy is awarded to the outstanding senior baseball player.

STUDENT GOVERNMENT AWARDS

Medals are awarded to members of the Executive Committee of the Student Government Association who faithfully perform their duties throughout the year.

PUBLICATIONS AWARDS

Medals are offered in *Diamondback*, *Terrapin* and *Old Line* work, for the students who have given most efficient and faithful service throughout the year.

RELIGIOUS INFLUENCES

The University recognizes its responsibility for the welfare of the students, not solely in their intellectual growth, but as human personalities whose development along all lines, including the moral and religious, is included in the educational process. Pastors representing the major denominational bodies assume responsibility for work with the students of their respective faiths. Each of the Student Pastors also serves a local church of his denomination, which the students are urged to attend.

Committee on Religious Affairs and Social Service. A faculty committee on Religious Affairs and Social Service has as its principal function the stimulation of religious thought and activity on the campus. It brings noted speakers on religious subjects to the campus from time to time. The committee cooperates with the Student Religious Activities Council and the student pastors and assists the student denominational clubs in every way that it can. Opportunities are provided for students to consult with pastors representing the denominations of their choice.

While there is no attempt to interfere with anyone's religious beliefs, the importance of religions is recognized officially and religious activities are encouraged.

Denominational Clubs. Several religious clubs, each representing a denominational group, have been organized among the students for their mutual benefit and to undertake certain types of service. This year the list includes the Baptist Student Union, the Canterbury Club (Episcopal), the Lutheran Club, the Newman Club, the Hillel Foundation, the Methodist Club, and the Presbyterian Club. These clubs meet regularly for worship and discussion, and occasionally for social purposes. A pastor or a member of the faculty serves as adviser. A local Y. W. C. A. also provides a variety of activities and services on a non-denominational basis.

ATHLETICS AND RECREATION

The University recognizes the importance of the physical development for all students, and besides the required physical education for freshmen and sophomores sponsors a comprehensive intercollegiate and intramural program. Students are encouraged to participate in competitive athletics and to learn the skill of games that may be carried on after leaving college. The intramural program which covers a large variety of sports is conducted by the Physical Education Department for both men and women.

A full program in intercollegiate athletics is sponsored under the supervision of the Athletic Board which is composed of faculty members. The University is a member of the Southern Conference, the National Collegiate Athletic Association, the United States Intercollegiate Lacrosse Association, Intercollegiate Amateur Athletic Association of America, and cooperates with other national organizations in the promotion of amateur athletics.

Excellent facilities are available for carrying on the activities of the program in physical development. The University has two modern gymnasia, a coliseum, a large armory, a number of athletic fields, tennis courts, baseball diamonds, running tracks and the like constituting the major portion of the equipment.

EXTRA-CURRICULAR STUDENT ACTIVITIES

The following description of student activties covers those of the undergraduate divisions of College Park. The descriptions of those in the Baltimore divisions is included elsewhere.

STUDENT GOVERNMENT

Regulation of Student Activities. The association of students in organized bodies for the purpose of carrying on voluntary student activities in orderly and productive ways, is recognized and encouraged. All organized student activities are under the supervision of the Student Life Committee. Such organizations are formed only with the consent of the Student Life Committee and the approval of the President. Without such consent and approval no student organization which in any way represents the University before the public, or which purports to be a University organization or an organization of University students, may use the name of the University in connection with its own name, or in connection with its members as students.

Student Government. The Student Government Association consists of the Executive Council, the Women's League, and the Men's League, and operates under its own constitution. Its officers are a president, a vice-president, a secretary, a treasurer, president of Women's League, and president of Men's League.

The Women's League, in cooperation with the Office of the Dean of Women, handles all matters pertaining to women students.

The Men's League, in cooperation with the Office of the Dean of Men, handles all matters pertaining to men students.

The Executive Council performs the executive duties incident to managing student affairs, and works in cooperation with the Student Life Committee.

The Student Life Committee, a faculty committee appointed by the President, keeps in close touch with all activities and conditions, excepting classroom work, that affect the student, and, acting in an advisory capacity, endeavors to improve any unsatisfactory conditions that may exist.

A pamphlet entitled **Academic Regulations,** issued annually and distributed to the students in the fall, contains full information concerning student matters as well as a statement of the rules of the University.

Eligibility to Represent the University. Only students in good standing are eligible to represent the University in extra-curricular contests. In addition, various student organizations have established certain other requirements. To compete in varsity athletics a student must pass the required number of hours as determined by the Athletic Board.

Discipline. In the government of the University, the President and faculty rely chiefly upon the sense of responsibility of the students. The student who pursues his studies diligently, attends classes regularly, lives honorably and maintains good behavior meets this responsibility. In the interest of the general welfare of the University, those who fail to maintain these standards are asked to withdraw. Students are under the direct supervision of the University only when on the campus, but they are responsible to the University for their conduct wherever they may be.

FRATERNITIES, SORORITIES, SOCIETIES AND CLUBS

General Statement

Fraternities and sororities, as well as all other clubs and organizations recognized by the University, are expected to conduct their social and financial activities in accordance with the rules of good conduct and upon sound business principles. Where such rules and principles are observed, individual members will profit by the experience of the whole group, and thereby become better fitted for their life's work after graduation. Rules governing the different activities will be found in the list of Academic Regulations.

Honorary Fraternities. Honorary fraternities and societies in the University at College Park are organized to uphold scholastic and cultural standards. These are Phi Kappa Phi, a national honorary fraternity open to honor students, both men and women, in all branches of learning; Sigma Xi, an honorary scientific fraternity; Omicron Delta Kappa, men's national honor society, recognizing conspicuous attainment in non-curricular activities and general leadership; Mortar Board, the national senior honor society for women recognizing service, leadership and scholarship; Alpha Lambda Delta, a national freshmen women's scholastic society requiring a 3.5 average; Phi Eta Sigma, national freshmen honor society for men. A group of honorary fraternities encourage development in specialized endeavor. These are Alpha Zeta, a national honorary agriculture fraternity recognizing scholarship and student leadership; Tau Beta Pi, a national honorary engineering fraternity; Phi Delta Kappa, a professional educational fraternity; Scabbard and Blade, a national military society; Pershing Rifles, a national military society for basic course R. O. T. C. students; Pi Delta Epsilon, a national journalistic fraternity; Omicron Nu, a national home economics society; Alpha Psi Omega, a national dramatic society; Beta Alpha Psi, a national accounting honorary fraternity; Pi Sigma Alpha, an honorary political science fraternity; and Beta Gamma Sigma, a national honorary commerce fraternity.

Fraternities and Sororities. There are seventeen national fraternities and eleven national sororities at College Park. These in the order of their establishment at the University are: Kappa Alpha, Sigma Nu, Phi Sigma Kappa, Delta Sigma Phi, Alpha Gamma Rho, Theta Chi, Phi Alpha, Tau Epsilon Phi, Alpha Tau Omega, Phi Delta Theta, Lambda Chi Alpha, Alpha Lambda Tau, Alpha Chi Epsilon (chemical), Sigma Alpha Mu, Alpha Epsilon Pi, Phi Kappa Sigma, Sigma Chi and Sigma Alpha Epsilon, national fraternities; Alpha Omicron Pi, Kappa Delta, Kappa Kappa Gamma, Delta Delta Delta, Alpha Xi Delta, Phi Sigma Sigma, Alpha Delta Pi, Sigma Kappa, Gamma Phi Beta and Alpha Epsilon Phi, national sororities; and Pi Beta Phi.

Clubs and Societies. Many clubs and societies, with literary, scientific, social and other special objectives, are maintained in the University. Some of these are purely student organizations; others are conducted jointly by students and members of the faculty. The list is as follows: Agricultural Council, Authorship Club, Bacteriology Society, Engineering Council, Horticulture Club, Block and Bridle Club, Calvert Debate Club, Women's Recreation Association, Footlight Club, Rossborough Club, American Society of Mechanical Engineers, American Society of Civil Engineers, American

Institute of Electrical Engineers, Chess Club, Swimming Club, International Relations Club, Clef and Key, Radio Club, Camera Club, Terrapin Trail Club, Student Grange, Farm Economics Club, Future Farmers of America, Riding Club, Collegiate Chamber of Commerce, Der Deutsche Verein, Spanish Club, Le Cercle Francaise, Chemical Engineering Club, Student Unit of the American Red Cross, Daydodgers Club, Art Club, Psychology Club, the Veterans Club, Cosmopolitan Club, Sociology Club, Roundtable Club, and Student Affiliate of the American Chemical Society.

STUDENT PUBLICATIONS

Three student publications are conducted under the supervision of the Faculty Committee on Student Publications.

The Diamondback, a newspaper, is published by the students. This publication summarizes the University news, and provides a medium of expression for the discussion of matters of interest to the students and the faculty.

The Terrapin, the student annual, is published by the Senior Class. It is a reflection of student activities, serving to commemorate the principal events of the college year.

The "M" Book, a handbook issued by the Student Board for the benefit of incoming students, is designed to acquaint them with general University life.

UNIVERSITY POST OFFICE

The University operates an office for the reception, dispatch and delivery of United States mail, including Parcel Post packages, and for inter-office communications. This office is located in the basement of the Administration Building. It is not a part of the United States Postal System and no facilities are available for sending or receiving postal money orders. Postage stamps, however, may be purchased. United States mail is received and dispatched several times daily.

Each student in the University is assigned a post office box at the time of registration, for which a small fee is charged. Also, boxes are provided for the various University offices.

One of the major reasons for the operaiton of the Post Office is to provide a convenient method by which Deans, teachers and University officials may communicate with students, and students are expected to call for their mail daily, if possible, in order that such communications may come to their attention promptly.

UNIVERSITY BOOKSTORE

For the convenience of students, the University maintains a Students' Supply Store, located in the basement of the Administration Building, where students may obtain at reasonable prices text books, stationery, classroom materials and equipment, confectionery, etc.

This store is operated on a basis of furnishing students needed books and supplies at as low a cost as practicable, and profits, if any, are turned into the general University treasury to be used for promoting general student welfare.

Students are advised not to purchase any text books until they have been informed by their instructors of the exact texts to be used in the various courses, as texts vary from year to year.

The bookstore is operated on a cash basis and credit is not extended to students.

ALUMNI

The Alumni Council, which is composed of representatives of each school and college in the University, coordinates all general Alumni interests, Alumni activities are further unified in two ways. There are organized alumni associations in the Schools of Medicine, Law, Pharmacy, Dentistry, and Nursing located in Baltimore. The alumni of the Colleges of Agriculture, Arts and Sciences, Commerce, Education, Engineering, and Home Economics, located at College Park, constitute a general association, each group having its own Board of Representatives. Each school and college Alumni organization exerts an active interest in the welfare of its respective graduates.

An Alumni Office is maintained at College Park, in the Administration Building, to direct the work of the association and to form a point of contact between the University and its graduates.

An alumni news magazine is published monthly.

SECTION II

Resident Instruction—College Park

COLLEGE OF AGRICULTURE

THOMAS B. SYMONS, *Dean*
H. F. COTTERMAN, *Assistant Dean*
DORIS A. LAND, *Secretary*

The College of Agriculture offers both general and specialized training for students who wish to prepare for professional work in the broad field of agricultural endeavor. Student programs are arranged with a view to correlating technical work with related sciences and cultural subjects. Education in fundamentals receives special attention. Accordingly, young men and women are given a basic general education while they are being instructed in the various branches of agriculture. In addition to offering this opportunity for thorough grounding in the related basic natural and social sciences, it is an objective of the College to provide trained personnel for agricultural and allied industries. This personnel is recruited from rural and urban areas. Farm-reared students enter either general or specialized curricula; city-reared students tend to follow the specialized programs.

General

The College provides curricula for those who wish to engage in general farming, livestock production, dairying, poultry husbandry, fruit or vegetable growing, floriculture or ornamental horticulture, field crop production, or in the highly specialized scientific activities connected with these industries. It prepares men to serve as farm managers, for positions with commercial concerns related to agriculture, for responsible positions as teachers in agricultural colleges and in departments of vocational agriculture in high schools or as investigators in experiment stations, for extension work, for regulatory activities, and for service in the United States Department of Agriculture. Its curricula in Animal Science, Botany (including Plant Physiology and Plant Pathology), Dairy Science, Entomology, Horticultural Science, Poultry Science, and Soil Technology offer rich opportunities to students with a scientific bent of mind, and lead to positions with many ramifications in teaching, research, extension, and regulatory work.

Through research the frontiers of knowledge relating to agriculture and the fundamental sciences underlying it are constantly being extended and solutions for important problems are being found. Research projects in many fields are in progress. Students taking courses in agriculture from instructors who devote part time to research, or are closely associated with it, are kept in close touch with the latest discoveries and developments in the investigations under way. The findings of these research scientists provide valuable information for use in classrooms, and make instruction virile and authentic. The results of the most recent scientific investigations are constantly before the student.

Close contact of workers in the College with the problems of farmers and their families in all parts of the State, through the county agents, home demonstration agents, and specialists brings additional life to resident instruction in the College of Agriculture. These contacts operate in two ways: problems confronting rural people are brought to the attention of research workers and the instructional staff, and results of research are taken to farmers and their families in their home communities through practical demonstrations. Hence the problems of the people of the State contribute to the strength of the College of Agriculture, and the College helps them in the improvement of agriculture and rural life.

Through their regulatory functions, certain trained workers in the College of Agriculture are continually dealing with the actual problems associated with the improvement and maintenance of the standards of farm products and animals. Regulatory and control work extends over a wide range of activities and is concerned with reducing the losses due to insect pests and diseases; preventing and controlling serious outbreaks of diseases and pests of animals and plants; analyzing fertilizers, feed, and limes for guaranteed quality; and analyzing and testing germination quality of seeds to insure better seeds for farm planting.

These fields contribute largely to agricultural education, as standardization and education go hand in hand in the development of an industry. Direct contact on the part of professors in their respective departments with the problems and methods involved makes for effective instruction.

Coordination of Agricultural Work

The strength of the College of Agriculture of the University of Maryland lies in the close coordination of the instructional, research, extension, and regulatory functions within the individual departments, between the several departments, and in the institution as a whole. Instructors in the several departments are closely associated with the research, extension and regulatory work being carried on in their respective fields, and in many cases, devote a portion of their time to one or more of these types of activities. Close coordination of these four types of work enables the University to provide a stronger faculty in the College of Agriculture, and affords a higher degree of specialization than would otherwise be possible. It insures instructors an opportunity to keep informed on the latest results of research, and to be constantly in touch with current trends and problems which are revealed in extension and regulatory activities. Heads of departments hold staff conferences to this end, so that the student at all times is as close to the developments in the frontiers of the several fields of knowledge as it is possible for organization to put him.

In order that the work of the College shall be responsive to agricultural interests and shall adequately meet the needs of the several agricultural industries in the State, and that the courses of instruction shall at all times be made most helpful for students who pursue them, Advisory Councils have been constituted in the major industries of agriculture. These Councils are composed of leaders in the respective lines of agriculture in Maryland, and the instructional staff of the College of Agriculture has the benefit of their counsel and advice. By this means the College, the industries, and the students are kept abreast of developments.

Facilities and Equipment

In addition to buildings, laboratories, libraries, and equipment for effective instruction in the related basic sciences and in the cultural subjects, the University of Maryland is provided with excellent facilities for research and instruction in agriculture. University farms, totaling more than 1200 acres, are operated for instructional and investigational purposes. One of the most complete and modern plants for dairy and animal husbandry work in the country, together with herds of the principal breeds of dairy and beef cattle, and other livestock, provides facilities and materials for instruction and research in these industries. Excellent laboratory and field facilities are available in the Agronomy Department for breeding and selection in farm crops, and for soils research. The Poultry Department has a building for laboratories and classrooms, a plant comprising thirty-four acres, and flocks of all the important breeds of poultry. The Horticulture Department is housed in a separate building, and has ample orchards and gardens for its various lines of work.

Departments

The College of Agriculture includes the following departments: Agricultural Chemistry; Agricultural Education and Rural Life; Agricultural Engineering; Agronomy (including Crops and Soils); Animal Husbandry; Botany (including Morphology, Plant Physiology and Plant Pathology); Dairy Husbandry (including Dairy Manufacturing); Entomology (including Bee Culture); Farm Management and Agricultural Economics; Horticulture (including Pomology, Olericulture, Floriculture, and Ornamental Horticulture); Poultry Husbandry; Veterinary Science.

Admission

The requirements for admission are given under Admission requirements to the University.

Junior Standing

To attain junior standing in the College of Agriculture, a student must have an average grade of C in not less than 70 semester hours.

Requirements for Graduation

Each student must acquire a minimum of 124 semester hour credits in academic subjects other than military science and physical activities. Men must acquire in addition 12 hours in military science and 4 hours in physical activities. Women must acquire in addition 4 hours in hygiene, and 4 hours in physical activities.

Farm and Laboratory Practice

The head of each department will help to make available opportunities for practical or technical experience along his major line of study for each student whose major is in that department and who is in need of such experience. For inexperienced students in many departments this need may be met by one or more summers spent on a farm.

Student Organizations

Students find opportunity for varied expression and growth in the several voluntary organizations sponsored by the College. These organizations are as follows: Student Grange, Livestock Club, Future Farmers of America, Alpha Zeta, Agricultural Economics Club, and the Agricultural Student Council.

Membership in these organizations is voluntary, and no college credits are given; yet much of the training obtained is fully as valuable as that acquired from regularly prescribed courses.

The Student Grange represents the Great National Farmers' fraternity of the Order of Patrons of Husbandry, and emphasizes training for rural leadership. It sponsors much deputation work in local Granges throughout the State. The Livestock Club conducts the Students' Fitting and Showing Contest held on the campus in the Spring. The Future Farmers of America foster interest in vocational education, and the Collegiate Chapter serves as host Chapter in connection with high school judging contests held at the University. The Agricultural Economics group conducts special studies in the field of Agricultural Economics. All these organizations have regular meetings, arrange special programs, and contribute to the extra-curricular life of students.

Membership in Alpha Zeta, national agricultural honor fraternity, is chosen from students in the College of Agriculture who have displayed agricultural and executive ability.

The Agricultural Student Council is made up of representatives from the various student organizations in the College of Agriculture. Its purpose is to coordinate activities of these students and to promote work which is beneficial to the College.

CURRICULA IN AGRICULTURE

Curricula within the College of Agriculture divide into three general classes: Technical, Scientific, and Special.

(1) Technical curricula are designed to prepare students for farming as owners, tenants, managers, or specialists; for positions as county agricultural agents, or teachers of agriculture in high schools; as executives, salesmen, or other employees in commercial businesses with close agricultural contact and point of view.

(2) Scientific curricula are designed to prepare students for positions as technicians, teachers, or investigators. These positions are usually in the various scientific and educational departments, or bureaus of the Federal, State, or Municipal governments; in the various schools or experiment stations; or in the laboratories of private corporations.

(3) Courses of study may be arranged for any who desire to return to the farm after one or more years of training in practical agricultural subjects.

Student Advisers

Each student in the College of Agriculture is assigned to a faculty adviser, either departmental or general. Departmental advisers consist of heads of departments or persons selected by them to advise students with curricula in their respective departments. General advisers are selected for students who have no definite choice of curriculum in mind, or who wish to pursue the general curriculum in agriculture.

Cases of students with poor records are referred to the Admission, Guidance, and Adjustment Committee, for review and advice.

Electives

The electives in the suggested curricula which follow afford opportunity for those who so desire to supplement major and minor fields of study or to add to their general training.

With the advice and consent of those in charge of his registration, a student may make such modifications in his curriculum as are deemed advisable to meet the requirements of his particular need.

Freshman Year

The program of the freshman year in the College of Agriculture is the same for all curricula of the College. Its purpose is to afford the student an opportunity to lay a broad foundation in subjects basic to agriculture and the related sciences, to articulate beginning work in college with that pursued in high or preparatory schools, to provide opportunity for wise choice of programs in succeeding years, and to make it possible for a student before the end of the year to change from one curriculum to another, or from the College of Agriculture to the curriculum in some other college of the University with little or no loss of credit.

Students entering the freshman year with a definite choice of curriculum in mind are sent to departmental advisers for counsel as to the wisest selection of freshman electives from the standpoint of their special interests and their probable future programs. Students entering the freshman year with no definite curriculum in mind, are assigned to general advisers, who assist with the choice of freshman electives and during the course of the year acquaint the students with the opportunities in the upper curricula in the College of Agriculture and in the other divisions of the University. If by the close of the freshman year a student makes no definite choice of a specialized curriculum, he continues under the guidance of his general adviser and at the beginning of the sophomore year enters Agriculture (General Curriculum).

Agriculture Curriculum

Freshman Year	*Semester* I	*Semester* II
Eng. 1, 2—Composition and Readings in American Literature	3	3
Pol. Sc. 1—American Government	3	....
Soc. 7—Sociology of American Life	....	3
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
P. E. 42, 44—Hygiene (Women)	2	2
R. Ed. 1—Introduction to Agriculture	0	....
*Elect either of the following pairs of courses:		
Bot. 1, General Botany and Zool. 1, General Zoology	4	4
Chem. 1, 3, General Chemistry	4	4
Elect one of the following each semester:		
Modern Language	3	3
†Math. 5, 6 or 10, 11, or 10, 13	3	3
Physics 1, 2—Elements of Physics	3	3
A. H. 2—Fundamentals of Animal Husbandry	3	....
Agron. 1—Farm Crops	....	3

Agriculture—General

This curriculum is designed for persons wishing to return to the farm, enter work allied to farming, for those seeking a general rather than a specialized knowledge of the field of agriculture and for those preparing to be county agents, teachers, etc.

By proper use of the electives allowed in this curriculum, a student may choose a field of concentration in agriculture and at the same time elect courses that contribute to liberal education.

General Agriculture Curriculum‡

Sophomore Year	*Semester* I	*Semester* II
Eng. 3, 4 or 5, 6	3	3
H. 5, 6—History of American Civilization	3	3
Chem. 1, 3—General Chemistry	4	4
P. H. 1—Poultry Production	3	....
D. H. 1—Fundamentals of Dairying	....	3
Speech 1, 2—Public Speaking	2	2
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	19	19

---

* Both pairs of courses are required for graduation from the College of Agriculture.

† Students who expect to pursue the curriculum in Agricultural Chemistry must be prepared to elect Math. 15, 11 or 14, 15 and 17. Students in Agricultural Engineering 14, 15 and 17.

‡ If A. H. 2 and Agron. 1 are not elected in the Freshman year they must be elected in subsequent years.

Junior Year	Semester I	Semester II
Zool. 104—Genetics	3	....
Hort. 1—General Horticulture	....	3
Ent. 1—Introductory Entomology	....	3
Soils 1—General Soils	3	....
Agr. Engr. 101—Farm Machinery	3	....
Agr. Engr. 102—Gas Engines, Tractors and Automobiles	....	3
A. E. 100—Farm Economics	3	....
Econ. 37—Fundamentals of Economics	....	3
Biological or Physical Science Sequence	3	3
Electives	3	3
Total	18	18

Senior Year	Semester I	Semester II
A. E. 107—Analysis of the Farm Business	3	....
A. E. 108—Farm Management	....	3
Agron. 151—Cropping Systems	....	2
R. Ed. 114—Rural Life and Education	....	3
Electives	12	9
Total	15	17

AGRICULTURAL CHEMISTRY

This curriculum insures adequate instruction in the fundamentals of both the physical and biological sciences. It may be adjusted through the selection of electives to fit the student for work in agricultural experiment stations, soil bureaus, geological surveys, food laboratories, fertilizer industries and those handling food products.

Agricultural Chemistry Curriculum

Sophomore Year	Semester I	Semester II
Eng. 3, 4 or 5, 6	3	3
Chem. 15, 17—Qualitative Analysis	3	3
Math. 20, 21—Calculus	4	4
Bot. 1—General Botany	4	....
Zool. 1—General Zoology	....	4
Speech 18, 19—Introductory Speech	1	1
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	19	19

Junior Year	Semester I	Semester II
Chem. 35, 37—Elementary Organic Lecture	2	2
Chem. 36, 38—Elementary Organic Laboratory	2	2
Chem. 21, 22—Quantitative Analysis	4	4
Modern Language	3	3
Geol. 1—Geology	3	....
Soils 1—General Soils	...	3
Electives in Biology	3	3
Total	17	17

Senior Year	Semester I	Semester II
H. 5, 6—History of American Civilization	3	3
Modern Language	3	3
Phys. 20, 21—General Physics	5	5
Electives in Agricultural Chemistry	6	6
Total	17	17

AGRICULTURAL ECONOMICS AND FARM MANAGEMENT

The curriculum in agricultural economics and farm management is designed to prepare students for the following types of positions: On the farm as farm operators and farm managers; with farm organizations, such as the Farm Bureau and farmers' cooperatives; with private and corporate business concerns; and positions with state and federal agencies, such as college teachers, agricultural extension workers, and research with federal and state agencies.

The courses in this department are designed to provide fundamental training in the basic economic principles underlying farming. The curriculum includes courses in farm management, general agricultural economics, marketing, finance, prices, taxation, and land economics to give the student the foundation needed to meet the production and distribution problems confronting the individual farmer in a progressive rural community.

Farming is a business, as well as a way of life, and as such demands for its successful conduct the use of business methods; the keeping of farm business records, analyzing the farm business, and of organizing and operating the farm as a business enterprise. It requires knowledge of farm resources and taxation, methods of financing agricultural production and marketing, including agencies involved, services rendered and the cost of getting products from the producer to the consumer through cooperative and private types of organization.

Agricultural Economics and Farm Management Curriculum*

Sophomore Year	Semester I	Semester II
Eng. 3, 4 or 5, 6	3	3
H. 5, 6—History of American Civilization	3	3
Chem. 1, 3—General Chemistry	4	4
Math. 5—General Mathematics	3	....
Econ. 37—Fundamentals of Economics	....	3
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	17	17

---

* If A. H. 2 and Agron. 1 are not elected in the Freshman Year, they must be elected in subsequent years.

Junior Year	Semester I	Semester II
A. E. 100—Farm Economics	3	....
A. E. 101—Marketing of Farm Products	....	3
A. E. 107—Analysis of the Farm Business	3	....
A. E. 104—Farm Finance	....	3
B. A. 130—Statistics	....	3
Speech 1, 2—Public Speaking	2	2
P. H. 1—Poultry Production	3	....
Hort. 1—General Horticulture	....	3
Soils 1—General Soils	3	....
Electives	4	4
Total	18	18

Senior Year	Semester I	Semester II
A. E. 103—Cooperation in Agriculture	3	....
A. E. 106—Prices of Farm Products	....	3
Agr. Engr. 101—Farm Machinery	3	....
A. E. 108—Farm Management	....	3
R. Ed. 110—Rural Life and Education	....	3
A. H. 52—Feeds and Feeding	3	....
Agron. 151—Cropping Systems	....	2
A. E. 111—Land Economics	3	....
A. E. 90, 91—Seminar	1	1
Electives	5	6
Total	18	18

AGRICULTURAL EDUCATION AND RURAL LIFE

The primary objective of this curriculum is to prepare for teaching secondary vocational agriculture, work as county agents and allied lines of the rural education services. Graduates from this curriculum are in demand in rural businesses, particularly of the cooperative type. A number have entered the Federal service. Others are engaged in teaching and research in agricultural colleges. Quite a few have returned to the farm as owner-managers.

In addition to the regular entrance requirements of the University, involving graduation from a standard four-year high school, students electing the agricultural education curriculum must present evidence of having acquired adequate farm experience after reaching the age of fourteen years.

Students with high average may upon petition be relieved of certain requirements in this curriculum, when evidence is presented that either through experience or previous training a prescribed course is non-essential. Or they may be allowed to carry an additional load.

Agricultural Education Curriculum*

Sophomore Year

	Semester I	Semester II
Eng. 3, 4 or 5, 6	3	3
H. 5, 6—History of American Civilization	3	3
Chem. 1, 3—General Chemistry	4	4
P. H. 1—Poultry Production	3	....
D. H. 1—Fundamentals of Dairy Husbandry	....	3
Speech 1, 2—Public Speaking	2	2
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	19	19

Junior Year

	I	II
Math. 5—General Mathematics	3	....
Phys. 1, 2—Elements of Physics	3	3
Bot. 20—Diseases of Plants	3	....
Ent. 1—Introductory Entomology	....	3
A. H. 52—Feeds and Feeding	3	....
Soils 1—General Soils	3	....
Hort. 1—General Horticulture	....	3
Agr. Engr. 101—Farm Machinery	3	....
A. E. 108—Farm Management	....	3
Econ. 37—Fundamentals of Economics	....	3
Psych. 80—Educational Psychology	....	3
Total	18	18

Senior Year

	I	II
R. Ed. 107—Observation and Analysis of Teaching	3	....
R. Ed. 109—Teaching Secondary Vocational Agriculture	3	....
R. Ed. 111—Teaching Part-Time and Adult Classes	1	....
R. Ed. 90—Practice Teaching	5	....
R. Ed. 51—Farm Practicums and Demonstrations	2	....
Agr. Engr. 54—Farm Mechanics	2	....
Agron. 151—Cropping Systems	....	2
D. H. 101—Dairy Production	....	3
R. Ed. 112—Departmental Management	....	1
R. Ed. 114—Rural Life and Education	....	3
Ed. 131—Theory of Senior High School	....	2
Electives	....	5
Total	16	16

---

* If A. H. 2 and Agron. 1 are not elected in the Freshman Year, they must be elected in subsequent years.

AGRICULTURAL ENGINEERING

The department offers to students of agriculture training in those agricultural subjects which are based upon engineering principles. These subjects may be grouped under three heads: farm machinery and farm power, farm buildings, and farm drainage.

Five-Year Program in Agriculture—Engineering

For those students who wish to specialize in the application of engineering principles to the physical and biological problems of agriculture there is offered a combined program, extending over a five-year period, arranged jointly by the College of Agriculture and the College of Engineering, and leading to a degree from each of these colleges.

This program prepares graduates to enter state, federal or commercial fields of activity in such work as soil and water conservation, rural electrification, design and sale of farm machinery and structures, and in the development of new uses for farm products and the profitable utilization of farm wastes and by-products.

To be properly trained in these fields a student needs a broader knowledge of basic and applied engineering principles than could be provided in a four-year course in agriculture. He also needs a broader training in the fundamentals of agriculture than a standard four-year course in engineering could furnish.

Upon completion of the normal four year course of study the degree of Bachelor of Science in Agriculture is granted. For the fifth year the student registers in the College of Engineering, and at the end of that year, upon satisfactory completion of the required course of study, receives a degree in civil, electrical, mechanical or chemical engineering.

Curriculum in Agriculture-Engineering

Freshman Year	*Semester* *I*	*Semester* *II*
Eng. 1, 2—Composition and Readings in American Literature	3	3
Speech 7—Public Speaking	....	2
*Math. 14—Plane Trigonometry	2	....
*Math. 15—College Algebra	3	....
Math. 17—Analytic Geometry	....	4
Chem. 1, 3—General Chemistry	4	4
Dr. 1, 2—Engineering Drawing	2	2
Engr. 1—Introduction to Engineering	1	....
R. Ed. 1—Introduction to Agriculture	0	....
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	19	19

The balance of this curriculum is for the student whose final objective is a degree in Civil Engineering. Corresponding curricula will be arranged for options in Electrical, Mechanical and Chemical Engineering.

---

* A qualifying test is given at the close of the first two weeks to determine whether the student is adequately prepared for Math. 14 and 15. A student failing this test is required to take Math. 1, Introductory Algebra, without credit.

Sophomore Year (Civil Engineering Option)

	Semester	
	I	II
Pol. Sci. 1—American Government	3	....
Soc. 7—Sociology of American Life	....	3
Math. 20, 21—Calculus	4	4
Phys. 20, 21—General Physics	5	5
Dr. 3—Advanced Engineering Drawing	2	....
Mech. 1—Statics and Dynamics	....	3
Surv. 1, 2—Plane Surveying	2	2
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	20	21

Junior Year (Civil Engineering Option)

	I	II
Eng. 3, 4 or 5, 6	3	3
Math. 16—Spherical Trigonometry	2	....
Geol. 2—Engineering Geology	....	2
Mech. 50—Strength of Materials	5	....
Mech. 52—Testing of Materials	....	2
C. E. 50—Hydraulics	....	4
Bot. 1—General Botany	4	....
Zool. 1—General Zoology	....	4
Agr. Engr. 101—Farm Machinery	3	....
Agr. Engr. 107—Farm Drainage	....	2
Agron. 1—Farm Crops	....	3
Elective in Agriculture	3	....
Total	20	20

Fourth Year (Civil Engineering Option)

	I	II
H. 5, 6—History of American Civilization	3	3
C. E. 100—Theory of Structures	....	4
Surv. 100—Advanced Surveying	4	....
M. E. 50—Principles of Mechanical Engineering	3	....
E. E. 50—Principles of Electrical Engineering	....	3
Agr. Engr. 102—Gas Engines, Tractors and Automobiles	....	3
Agr. Engr. 105—Farm Buildings	2	....
A. E. 108—Farm Management	....	3
Electives in Agriculture	8	4
Total	20	20

Fifth Year (Civil Engineering Option)

	I	II
Speech 108—Public Speaking	....	2
C. E. 52—Curves and Earthwork	3	....
Econ. 37—Fundamentals of Economics	3	....
Engr. 100—Engineering Contracts and Specifications	....	2
Eng. 7—Technical Writing	....	2
Bact. 54—Lectures in Sanitary Bacteriology	1	....
C. E. 101—Elements of Highways	3	....
C. E. 102—Structural Design	6	....
C. E. 103—Concrete Design	....	6
C. E. 104, 105—Municipal Sanitation	3	3
C. E. 106—Soils and Foundations	....	3
Total	19	18

AGRONOMY

The curricula in this department are separated into two major divisions; namely Crops and Soils. The Crops division includes Crop Production and Crop Breeding. The Crop Production curriculum is designed to prepare students for general farming, specialized crop farming, the production of improved seeds, employment with commercial firms, state and federal experiment stations, or county agent work. The curriculum for Plant Breeding is designed to prepare students to work with commercial seed companies or federal and state experiment stations. The curriculum in Soils is designed both to equip future farmers with adequate knowledge of soils and to prepare students for teaching, research, and special soils work. Although the Soils curriculum is placed in the Department of Agronomy, its courses are designed for all students who have soil interests regardless of the line of their major specialization.

Crop Production Curriculum*

	Semester	
Sophomore Year	*I*	*II*
Eng. 3, 4 or 5, 6	3	3
H. 5, 6—History of American Civilization	3	3
Chem. 1, 3—General Chemistry	4	4
Soils 1—General Soils	3	....
Econ. 37—Fundamentals of Economics	....	3
Speech 1, 2—Public Speaking	2	2
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	19	19
Junior Year		
Agron. 51—Technology of Crop Quality	2	....
Agron. 54—Selected Crop Studies	....	2-4
Zool. 104—Genetics	....	3
Ent. 1—Introductory Entomology	....	3
Bact. 1—General Bacteriology	4	....
Bot. 101—Plant Physiology	4	....
Bot. 20—Diseases of Plants	3	....
Math. 5—General Mathematics	3	....
Electives	2	8-10
Total	18	18
Senior Year		
Agron. 103—Crop Breeding	2	....
Agron. 151—Cropping Systems	....	2
A. E. 108—Farm Management	....	3
Agr. Engr. 101—Farm Machinery	3	....
Agr. Engr. 107—Farm Drainage	....	2
Soils 112—Soil Conservation	3	....
A. H. 52—Feeds and Feeding	3	....
Electives	5	9
Total	16	16

---

* If A. H. 2 and Agron. 1 are not elected in the Freshman Year they must be elected in subsequent years.

Crop Breeding Curriculum*

Sophomore Year

	Semester	
	I	II
Eng. 3, 4 or 5, 6	3	3
H. 5, 6—History of American Civilization	3	3
Chem. 1, 3—General Chemistry	4	4
Soils 1—General Soils	3	....
Econ. 37—Fundamentals of Economics	....	3
Speech 1, 2—Public Speaking	2	2
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	19	19

Junior Year

	I	II
Agron. 51—Technology of Crop Quality	2	....
Agron. 54—Selected Crop Studies	....	2-4
Zool. 104—Genetics	....	3
Bact. 1—General Bacteriology	4	....
Bot. 101—Plant Physiology	4	....
Bot. 20—Diseases of Plants	3	....
Math. 10, 13—Algebra, Elements of Mathematical Statistics	3	3
Electives	2	8-10
Total	18	18

Senior Year

	I	II
Agron. 103—Crop Breeding	2	....
Agron. 151—Cropping Systems	....	2
A. E. 108—Farm Management	....	3
Agr. Engr. 101—Farm Machinery	3	....
Agr. Engr. 107—Farm Drainage	....	2
Soils 112—Soil Conservation	3	....
A. H. 52—Feeds and Feeding	3	....
Electives	5	9
Total	16	16

Soils Curriculum*

Sophomore Year

	I	II
Eng. 3, 4 or 5, 6	3	3
H. 5, 6—History of American Civilization	3	3
Bot. 1—General Botany	4	....
Bact. 1—General Bacteriology	....	4
Soils 1—General Soils	3	....
Soils 2—Principles of Soil Fertility	....	3
Speech 1, 2—Public Speaking	2	2
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	19	19

---

* If A. H. 2 and Agron. 1 are not elected in the Freshman Year they must be elected in subsequent years.

Junior Year

	Semester I	Semester II
Soils 51—Soil Investigation Methods	2	....
Soils 103—Soil Geography	....	3
Bot. 101—Plant Physiology	4	....
Agr. Engr. 107—Farm Drainage	....	2
Geol. 1—Geology	3	....
Chem. 31, 33—Elements of Organic Chemistry	2	2
Chem. 32, 34—Elements of Organic Laboratory	1	1
Electives	6	10
Total	18	18

Senior Year

	Semester I	Semester II
Soils 112—Soil Conservation	3	....
Soils 120—Soil Management	....	3
Agron. 151—Cropping Systems	....	2
Zool. 104—Genetics	3	....
A. E. 108—Farm Management	....	3
B. A. 130—Elements of Statistics	3	....
Electives	7	8
Total	16	16

ANIMAL HUSBANDRY

The curriculum in Animal Husbandry is organized for the purpose of preparing students for various phases of work in the field of animal industry as: operators and managers of livestock farms, as investigators and research workers in federal, state, and private institutions, and as workers in specialized fields where a knowledge of the livestock industry is necessary.

By proper use of electives, the student may equip himself to become a county agricultural agent; to meet the requirements of positions with certain types of private and cooperative business concerns; or, with more technical and specialized training, to become qualified for instructional work in colleges, for investigational work in state and federal experiment stations or in commercial research laboratories. Students who desire to enter the field of teaching or highly specialized research should elect the more scientific courses offered by this and by other departments.

Animal Husbandry Curriculum

Sophomore Year

	Semester I	Semester II
Eng. 3, 4 or 5, 6	3	3
H. 5, 6—History of American Civilization	3	3
Chem. 1, 3—General Chemistry	4	4
D. H. 1—Fundamentals of Dairying	....	3
Soils 1—Soils	3	....
Speech 1, 2—Public Speaking	2	2
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	19	19

	—Semester—	
Junior Year	*I*	*II*
Chem. 31, 33—Elements of Organic Chemistry	2	2
Chem. 32, 34—Elements of Organic Laboratory	1	1
Bact. 1—General Bacteriology	4	....
A. H. 31—Livestock Judging	....	2
A. H. 52—Feeds and Feeding	3	....
A. H. 53—Principles of Breeding	....	3
**A. H. 64—Sheep Production	2	....
**A. H. 67—Pork Production	....	2
A. E. 108—Farm Management	....	3
Zool. 104—Genetics	3	....
Econ. 37—Fundamentals of Economics	....	3
Electives	3	2
Total	18	18
Senior Year		
A. H. 55—Livestock Management	....	3
**A. H. 60—Beef Production	2	....
**A. H. 69—Draft Horse Production	....	2
A. H. 112—Livestock Markets and Marketing	2	....
A. H. 114—Animal Nutrition	3	....
V. S. 101—Comparative Anatomy and Physiology	3	....
V. S. 102—Animal Hygiene	....	3
Agr. Engr. 101—Farm Machinery	3	....
Electives	3	8
Total	16	16

BOTANY

The department offers three major fields of work: plant morphology and plant taxonomy; plant pathology or plant physiology and plant ecology. The required courses for the freshman and sophomore years are the same for all students. In the junior and senior years, the student elects botany courses to suit his particular interest. Courses are elected in other subjects to contribute toward a broad cultural education, and to support the courses selected in the chosen field of botany.

Through cooperation with the College of Education, students who wish to meet the requirements for the state high school teacher's certificates, may elect the necessary work in education.

The curriculum as outlined, provides a complete survey of the field of botany for prospective high school teachers, and lays a good foundation for graduate work in botany in preparation for college teaching and for research in state or federal experiment stations, or in private research laboratories.

Students are also afforded an opportunity for training in other vocations involving various botanical applications, such as extension work, and positions with seed companies, canning companies and other commercial concerns.

** Only two production courses are required for graduation. The student may choose any two of these four courses to fulfill this requirement.

Botany Curriculum

	Semester	
	I	II
Sophomore Year		
Eng. 5, 6 or Eng. 3, 4	3	3
Modern Language	3	8
Bot. 20—Diseases of Plants	3	....
Bot. 2—General Botany	....	4
Chem. 1, 3—General Chemistry	4	4
Speech 1, 2—Public Speaking	2	2
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	19	20
Junior Year		
H. 5, 6—History of American Civilization	3	3
Modern Language	3	3
Phys. 10, 11—Fundamentals of Physics	4	4
Bot. 101—Plant Physiology	4	....
Bot. 50—Plant Taxonomy	....	3
Bot. 51—Plant Microtechnique	....	2
Bact. 1—Bacteriology	4	....
Electives	....	2
Total	18	17
Senior Year		
Bot. 52—Seminar	1	1
Bot. 111—Plant Anatomy	3	....
Bot. 102—Plant Ecology	....	3
Bot. 115—Structure of Economic Plants	....	2
Bot. 116—History and Philosophy of Botany	1	....
Zool. 104—Genetics	3	....
Botany Electives	3–8	3–5
Electives	5–0	7–5
Total	16	16.

Students specializing in Plant Morphology or Plant Taxonomy will elect Bot. 114 and Bot. 128; those specializing in Plant Pathology will elect Bot. 122, Bot. 121 and Ent. 1; those specializing in Plant Physiology will elect Organic Chemistry, Chem. 31, 32, 33, 34.

DAIRY HUSBANDRY

The department offers instructions in two major lines of work; dairy production and dairy manufacturing. The curricula are designed to prepare students for practical work in dairy farming and dairy manufacturing industries, for scientific work in the dairy industry, and as technical workers with milk cooperatives, dairy breed associations, and private and public concerns.

Dairy Production Curriculum*

Sophomore Year

	Semester	
	I	*II*
Eng. 3, 4 or 5, 6	3	3
H. 5, 6—History of American Civilization	3	3
Chem. 1, 3—General Chemistry	4	4
Bact. 1—General Bacteriology	4	....
Agron. 1—Farm Crops	....	3
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	18	18

Junior Year

Chem. 31, 33—Elements of Organic Chemistry	2	2
Chem. 32, 34—Elements of Organic Chemistry Laboratory	1	1
Econ. 37—Fundamentals of Economics	....	3
Speech 1, 2—Public Speaking	2	2
Bact. 133—Dairy Bacteriology	4	....
Zool. 104—Genetics	3	....
Soils 1—Soils	3	....
A. H. 52—Feeds and Feeding	3	....
A. H. 53—Principles of Breeding	....	3
D. H. 30—Dairy Cattle Judging	....	2
D. H. 101—Dairy Production	....	3
D. H. 113—Market Milk	....	4
Total	18	18

Senior Year

Agr. Engr. 101—Farm Machinery	3	....
A. E. 108—Farm Management	....	3
V. S. 101—Comparative Anatomy and Physiology	3	....
V. S. 102—Animal Hygiene	....	3
A. H. 114—Animal Nutrition	3	....
D. H. 50—Dairy Cattle Management	1	....
D. H. 105—Dairy Breeds and Breeding	2	....
D. H. 120, 121—Dairy Seminar	1	1
Electives	4	10
Total	17	17

Dairy Manufacturing Curriculum†

Sophomore Year

Eng. 3, 4 or 5, 6	3	3
H. 5, 6—History of American Civilization	3	3
Chem. 1, 3—General Chemistry	4	4
Zool. 1—General Zoology	4	....
Bact. 1—General Bacteriology	....	4
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	18	18

---

* Students planning to pursue this curriculum should elect D. H. 1 the second semester of the freshman year. If A. H. 2 is not elected in the freshman year it must be elected in subsequent years.

† Students planning to pursue this curriculum should elect D. H. 1 in the Freshman Year.

	Semester	
Junior Year	*I*	*II*
Chem. 31, 33—Elements of Organic Chemistry	2	2
Chem. 32, 34—Elements of Organic Chemistry Laboratory	1	1
Chem. 19—Quantiative Analysis	....	4
Econ. 37—Fundamentals of Economics	....	3
Bact. 133—Dairy Bacteriology	4	....
Speech 1, 2—Public Speaking	2	2
D. H. 40—Grading Dairy Products	....	2
D. H. 102—Dairy Technology	4	....
D. H. 110—Butter and Cheese Making	4	....
D. H. 113—Market Milk	....	4
Total	17	18

Senior Year		
D. H. 111—Concentrated Milk Products	....	2
D. H. 112—Ice Cream	4	....
D. H. 114—Special Laboratory Methods	3	....
D. H. 115—Dairy Plant Ordinances and Standards	2	....
D. H. 116—Dairy Plant Management	....	4
D. H. 120, 121—Dairy Seminar	1	1
Electives	8	10
Total	18	17

ENTOMOLOGY

This curriculum trains students for work in state and federal entomological bureaus, in preparation for commercial pest control operations and for actual insect control on their own farms. In addition, entomology is taught as a cultural subject because of its wide field of application, its varied subject matter, and the general interest of the public in the small creatures.

Entomology Curriculum*

	Semester	
Sophomore Year	*I*	*II*
Eng. 3, 4 or 5, 6	3	3
H. 5, 6—History of American Civilization	3	3
Chem. 1, 3—General Chemistry	4	4
Ent. 2—Insect Morphology	3	....
Ent. 3—Insect Taxonomy	....	3
Speech 1, 2—Public Speaking	2	2
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	19	19

---

* Students planning to pursue this curriculum should elect Ent. 1 the second semester of the Freshman year.

Junior Year	Semester I	Semester II
Chem. 31, 33—Elements of Organic Chemistry	2	2
Chem. 32, 34—Elements of Organic Chemistry Lab.	1	1
Bot. 1—General Botany	4	....
Bact. 1—General Bacteriology	....	4
Ent. 103, 104—Insect Pests	3	3
Phy. 1, 2—Elements of Physics	3	3
Foreign Language	3	3
Electives	2	2
Total	18	18

Senior Year	Semester I	Semester II
Bot. 20—Diseases of Plants	3	....
Ent. 105—Medical Entomology	3	....
Ent. 101—Economic Entomology	....	3
*Ent. 110, 111—Special Problems	1	1
Ent. 112—Seminar	1	1
Foreign Language	3	3
Electives	6	8
Total	17	16

HORTICULTURE

This department offers instruction in pomology (fruits), olericulture (vegetables), floriculture (flowers), and ornamental gardening. These courses prepare students to enter commercial production and the horticultural industries. Students are likewise prepared to enter the allied industries as horticultural workers with fertilizer companies, seed companies, equipment manufacturers, and others. Students who wish to enter specialized fields of research and teaching may take advanced work in the department.

Pomology and Olericulture Curriculum

Sophomore Year	Semester I	Semester II
Eng. 3, 4 or 5, 6	3	3
H. 5, 6—History of American Civilization	3	3
Chem. 1, 3—General Chemistry	4	4
Soils 1—General Soils	3	....
Hort. 5, 6—Fruit Production	3	2
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Electives	....	4
Total	20	20

---

* Students may satisfy this requirement in one semester, if their schedule permits, or expand the work and credits upon departmental approval.

	Semester	
Junior Year	I	II
Bot. 101—Plant Physiology	4	....
Bot. 111—Plant Anatomy	3	....
Bot. 20—Diseases of Plants	3	....
Hort. 58—Vegetable Production	....	4
Hort. 59—Small Fruits	....	3
Speech 1, 2—Public Speaking	2	2
Econ. 37—Fundamentals of Economics	....	3
Electives	5	5
Total	17	17

Senior Year

Hort. 55—Commercial Processing of Horticultural Crops	4	....
Hort. 101, 102—Technology of Fruits	2	2
Hort. 103, 104—Technology of Vegetables	2	2
Zool. 104—Genetics	3	....
Bot. 115—Structure of Economic Plants	....	2
Hort. 118, 119—Seminar	1	1
Electives	4	9
Total	16	16

Floriculture and Ornamental Horticulture Curriculum

Sophomore Year

Eng. 3, 4 or 5, 6	3	3
H. 5, 6—History of American Civilization	3	3
Chem. 1, 3—General Chemistry	4	4
Soils 1—General Soils	3	....
Hort. 22—Landscape Gardening	2	....
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Electives	....	5
Total	19	19

Junior Year

Bot. 101—Plant Physiology	4	....
Bot. 50—Plant Taxonomy	....	3
Hort. 107, 108—Plant Materials	2	3
Speech 1, 2—Public Speaking	2	2
Bot. 111—Plant Anatomy	3	....
Econ. 37—Fundamentals of Economics	....	3
Bot. 20—Diseases of Plants	3	....
Electives	7	7
Total	18	18

	Semester	
Senior Year	I	II
Bot. 121—Diseases of Special Crops	3	....
Hort. 16—Garden Flowers	....	3
Hort. 118, 119—Seminar	1	1
Electives	12	12
Total	16	16
Required of students specializing in floriculture:		
Hort. 10, 11—Greenhouse Management	3	3
Hort. 50, 51—Commercial Floriculture	3	3
Zool. 104—Genetics	3	....
Required of students specializing in landscape and ornamental horticulture:		
Hort. 52, 53—Landscape Design	3	3
Dr. 1, 2—Engineering Drawing	2	2
Hort. 54—Civic Art	....	2
Surv. 1, 2—Plane Surveying	2	2
Total	16	15

POULTRY HUSBANDRY

The curriculum in poultry husbandry is designed to give the student a thorough knowledge of subject matter necessary for poultry raising; the marketing, distribution, and processing of poultry products; poultry improvement work; and as a basis for graduate training for teaching and research in poultry husbandry.

The suggested curriculum will be modified to meet the special needs of individual students. Superior students, definitely anticipating preparation for a professional career in poultry husbandry, will be expected to take a language. However, all students majoring in poultry husbandry will be required to complete 24 semester hours in poultry husbandry.

Poultry Curriculum*

	Semester	
Sophomore Year	I	II
Eng. 3, 4 or 5, 6	3	3
Chem. 1, 3—General Chemistry	4	4
P. H. 50—Poultry Biology	....	3
Speech 1, 2—Public Speaking	2	2
H. 5, 6—History of American Civilization	3	3
Math. 5—General Mathematics	3	....
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	19	19

---

* Students planning to pursue this curriculum should elect P. H. 1 the first semester of the Freshman Year. If Agron. 1 is not elected the Freshman Year it must be elected in subsequent year.

	Semester	
Junior Year	*I*	*II*
P. H. 52—Poultry Nutrition	3	....
P. H. 56—Physiology of Hatchability	....	3
P. H. 51—Poultry Genetics	....	3
Bact. 1—General Bacteriology	4	....
Zool. 104—Genetics	3	....
Econ. 37—Fundamentals of Economics	....	3
B. A. 130—Elements of Statistics	....	3
Electives	7	5
Total	17	17

Senior Year		
P. H. 104—Poultry Marketing Problems	2	....
P. H. 105—Egg Marketing Problems	....	2
V. S. 108—Avian Anatomy	3	....
V. S. 107—Poultry Hygiene	....	3
P. H. 58—Commercial Poultry Management	....	2
P. H. 107—Poultry Industrial and Economic Problems	2	....
Ent. 1—Introductory Entomology	....	3
Agr. Engr. 101—Farm Machinery (3) or Agr. Engr. 105—Farm Buildings (2)	3–2	....
P. H. 108—Special Poultry Problems	1–2	1–2
Electives	5–7	5–6
Total	17	17

Pre-Theological Students

The College of Agriculture is glad to cooperate with the officers of any theological seminary who desire to urge its prospective students to pursue courses in agriculture as a preparation for the rural ministry. Such pre-theological students may enroll for a semester or more or for the usual four year training of the College. In either case they should enroll as members of the general curriculum in the College of Agriculture.

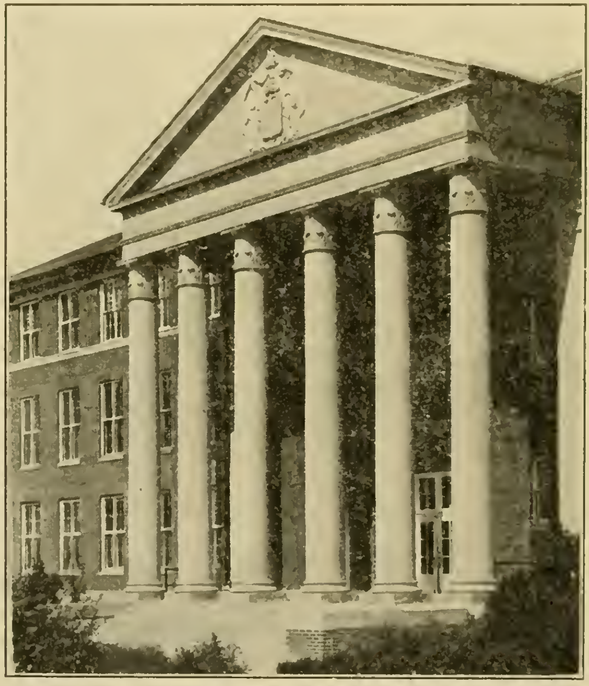
The electives of this curriculum may be used for such pre-theological requirements as seem desirable. Elections may be made from any of the offerings of the University such as history, political science, philosophy, agricultural economics, rural sociology, modern language, English, economics, psychology, sociology, natural science, education and the like. Students desiring to pursue a pre-theological program in the College of Agriculture of the University of Maryland, should consult with the president or admissions officer of the theological seminary which they expect to attend.

Special Students in Agriculture

Mature students may, with consent of the Dean, register as special students and pursue a program of studies not included in any regular curriculum, but arranged to meet the needs of the individual. All university fees for these special students are the same as fees for regular students.

There are many young farmers who desire to take short intensive courses in their special lines of work during slack times on the farm. Arrangements have been made to permit such persons to register at the office of the Dean of the College of Agriculture and receive cards granting them permission to visit classes and work in the laboratories of the different departments. This opportunity is created to aid florists, poultrymen, fruit-growers, gardeners, or other especially interested persons who are able to get away from their work at some time during the year.

The regular charges are $5.00 for registration and $1.50 per credit hour per month for the time of attendance. One registration is good for any amount of regular or intermittent attendance during a period of four years.



College of Agriculture

COLLEGE OF ARTS AND SCIENCES

J. F. Pyle, *Acting Dean*

Reba A. Turner, *Secretary*

The College of Arts and Sciences is making the necessary adjustments to meet the educational needs of post war conditions. It cooperated fully with the government during the war with the axis powers in Europe by providing war training courses in chemistry, physics, bacteriology, mathematics, and other essential fields of study and research. It met other war training needs in the required pre-professional training in medicine, dentistry, veterinary medicine, and nursing.

The College is preparing to furnish the civilian students of the future, including the returning service personnel, with liberal and technical training in the physical sciences, the social sciences, the biological sciences, and the humanities. This form of education affords the student an opportunity to acquire a general education which will serve as a foundation for whatever profession or vocation he may choose.

Students in other colleges of the university are offered training in fundamental courses that serve as a background for their professional education. The new program in American Civilization is open to all students of the university as well as to those in Arts and Sciences.

Divisions

The College of Arts and Sciences is divided into one Lower Division and four Upper Divisions. Under the latter are grouped the following departments:

A. The Divisions of Biological Sciences: Bacteriology, Botany, Entomology, Genetics, and Zoology.

B. The Division of Humanities: Art, Classical Languages and Literatures, Comparative Literature, English Literature and Philology, Foreign Languages and Literatures, Music, Philosophy, and Speech.

C. The Division of Physical Sciences: Astronomy, Chemistry, Geology, Mathematics, and Physics.

D. The Division of Social Sciences: Economics, History, Political Science, Psychology, and Sociology.

The work of the first and second years in the College of Arts and Sciences is taken in the Lower Division. It is designed to give the student a basic general education, and to prepare him for specialization in the junior and senior years.

The upper divisions direct the courses of study of students doing their major work in the College of Arts and Sciences during their junior and senior years.

Requirements for Admission

The requirements for admission to the College of Arts and Sciences are, in general, the same as those for admission to the other colleges and schools of the University.

For admission to the pre-medical curriculum, two years of any one foreign language are recommended. A detailed statement of the requirements for admission to the School of Medicine and the relation of these to the pre-medical curriculum may be obtained by writing the Director of Admissions.

Degrees

The degrees conferred upon students who have met the requirements prescribed in the College of Arts and Sciences are bachelor of arts and bachelor of science.

Students of this college who complete the regular courses in Humanities and Social Sciences are awarded the degree of bachelor of arts. Students who complete the requirements for the degree of bachelor of science are awarded that degree, provided the major portion of the work has been done in the field of science, and the application has the approval of the science department in which the major work has been completed.

Students who have elected the combined program of arts and sciences and medicine may be granted the degree of bachelor of science after the completion of at least 90 semester hours credit in addition to the required work in military science, hygiene and physical education in this college and the first year of the School of Medicine, so that the quantitative requirements of 120 credits are met, and they are recommended by the Dean of the School of Medicine.

Those electing the combined five-year academic nursing curriculum, for which the degree of bachelor of science in nursing may be awarded upon the completion of the full course, must first take the pre-nursing curriculum in the College of Arts and Sciences *before* the nursing course in Baltimore.

Those taking the combined course in arts and law may be awarded the bachelor of arts degree after the completion of three years of the work in this college and one year of the full-time law course, or its equivalent, in the School of Law. The total minimum number of credits required for graduation is 120 semester hours exclusive of military science, hygiene, and physical activities.

Residence

The last thirty semester hours credit of any curriculum leading to a baccalaureate degree in the College of Arts and Sciences must be taken in residence in this University.

Students working for one of the combined degrees must earn the last 30 semester hours credit of the arts program in residence, in the College of Arts and Sciences, College Park.

Requirements for Degrees

The baccalaureate degree from the College of Arts and Sciences may be conferred upon a student who has satisfied the following requirements:

1. University requirements.

2. College of Arts and Sciences requirements:

A minimum of 120 semester hours credit in academic subjects other than military science is required for a bachelor's degree. Men must acquire in addition 12 semester hours in military science, and 4 semester hours credit in physical activities. Women must acquire in addition 4 semester hours credit in hygiene and 4 semester hours credit in physical activities.

A student must acquire a minimum of 58 credits exclusive of the requirements in military science, hygiene, and physical activities with an average grade of at least C in the Freshman and Sophomore years before being admitted to an upper division.

The following minimum requirements should be fulfilled, as far as possible, before the beginning of the junior year and must be completed before graduation:

I. English—twelve semester hours.

II. Foreign Language—twelve semester hours in one language. Students wishing to enroll in a language they have studied in high school will be given a placement test.

III. Social Sciences—twelve semester hours.

IV. Speech—two to four semester hours depending upon the particular schedule.

V. Natural Science and Mathematics—twelve semester hours.

VI. Military Science for men, twelve semester hours.

VII. Hygiene, for women, four semester hours.

VIII. Physical Activities, for both men and women, four semester hours. Military science and physical activities are required throughout the freshman and sophomore years, Hygiene during the freshman year.

3. Major and minor requirements—When the requirements of the Freshman and Sophomore years have been completed each student is expected to select a major in one of the departments of an upper division, and before graduation must complete a major and a minor. The courses constituting the major and the minor must conform to the requirements of the department in which the major work is done.

Before beginning a major or minor the student must have an average of not less than C in fundamental courses in the fields chosen.

A major shall consist, in addition to the underclass departmental requirements, of 24-40 hours, of which at least 12 must be in courses numbered 100 and above.

A minor shall consist, in addition to the underclass departmental requirements, of 12 to 20 hours, of which at least 6 must be in courses numbered

100 and above. Minor courses shall be chosen with the advice of the major in consultation with the minor department to supplement the student's major work.

The average grade of the work taken in the major and minor fields must be at least C. A general average of at least C is required for graduation.

Certification of High School Teachers

If courses are properly chosen in the field of education, a prospective high school teacher can prepare for high school positions, with major and minor in one of the upper divisions of this College.

Electives in Other Colleges and Schools

A limited number of courses may be counted for credit in the College of Arts and Sciences for work done in other colleges and schools of the University.

The number of credits which may be accepted from the various colleges and schools is as follows:

College of Agriculture—20.

College of Business and Public Administration—20.

College of Education—24.

College of Engineering—20.

College of Home Economics—20.

School of Law—In the combined program the first year of law must be completed.

School of Medicine—In the combined program the first year of medicine must be completed.

School of Nursing—In the combined program the three years of nursing must be completed.

Normal Load

The normal load for students in this college is 15 semester hours credit per semester, exclusive of the required work in physical activities and military science and hygiene for women.

Juniors and seniors are not permitted to register for more than 17 hours unless they have a "B" average for the preceding semester and the approval of the Dean of the College.

Advisers

Freshmen and sophomores in this college shall consider the Dean of the College their general adviser.

Juniors and seniors will consider the head of their major department their adviser, and should consult him about the arrangements of their schedules of courses.

Work in the Freshman and Sophomore Years

The work of the first two years in the College of Arts and Sciences is designed to give the student a basic general education, and to prepare him for specialization in the latter part of his course.

It is the student's responsibility to develop in these earlier years such proficiency in basic subjects as may be necessary for his admission into one of the Upper Divisions of the College. Personal aptitude and a general scholastic ability must also be demonstrated, if permission to pursue a major study is to be obtained.

Suggested courses of study are given under certain of the upper divisions. The student should follow the curriculum for which he is believed to be best fitted. It will be noted that a core group of studies is required of all students who are candidates for a bachelor's degree. These subjects should be taken, when possible, during the Freshman and Sophomore years. There is a great deal of similarity in these outlines for the first four semesters, and a student need not consider himself attached to any particular upper division until the beginning of his junior year, at which time he is to select a major.

The following curriculum gives the subjects required of students in the Humanities and the Social Sciences. Students wishing to major in the Physical or Biological Sciences will find the requirements in the curriculums listed on the following pages.

	Semester	
Freshman Year	*I*	*II*
Eng. 1, 2—Composition and Readings in American Literature	3	3
G. & P. 1—American Government (or Scoiology of American Life)	3	....
Soc. 1—Sociology of American Life (or American Government)	....	3
*Foreign Language	3	3
Mathematics or Natural Science	3	3
L. S. 1, 2—Library Science	1	1
Speech 1, 2—Public Speaking	2	2
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
P. Ed. 42, 44—Hygiene (Women)	2	2
Physical Activities	1	1
Total	18–20	18–20

Sophomore Year		
Eng. 3, 4 or 5, 6—Composition and Readings in World Literature	3	3
Hist. 5, 6—History of American Civilization	3	3
Foreign Language	3	3
Natural Science and Mathematics	3	3
Elective	3	3
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities (Men and Women)	1	1
Total	16–19	16–19

---

* A placement test is given during Registration Week for students wishing to pursue a language they have studied in high school.

AMERICAN CIVILIZATION

The program in American Civilization embraces required work, a combined major-minor plan for juniors and seniors, and graduate studies. (For information concerning the required work, see page 26 of this catalog; for information concerning the graduate program, see the bulletin of the Graduate School.)

The Committee in charge of the program represents the departments of English, History, Government and Politics, Economics, and Sociology. Members of the committee serve as official advisers to students electing to work in the field.

The principal objectives of the work for majors are cultural rather than professional; yet the work is excellent preparation for certain careers. Students are directed towards an understanding of the configuration of our civilization, and this understanding should prove valuable in (for example) business, government, journalism, the law, and teaching.

The program is intended to have generous breadth, but the danger of securing breadth without depth is offset by the requirement of an area of concentration. Studies in American civilization are supplemented by studies in source cultures and interacting cultures; however, in choosing a curriculum, students are required to stress literature or history. Some work in American history and American literature is required of all who enroll in the program; but work in English literature is required of students who elect to emphasize literature, and work in European history is required of students who elect to emphasize history. Elective courses are, with the aid of an official adviser, chosen from courses offered in the humanities, in the social sciences, or in education. Normally, most elective courses are in history, English, foreign languages, comparative literature, economics, sociology, political science, and philosophy; but it is possible for a student to fulfill the requirements of the program and to elect as many as thirty semester hours in such subjects as art and psychology provided that such work fits into a carefully planned program.

In his senior year, each major is required to take a conference course in which the study of American civilization is brought to a focus. During this course, the student analyses eight or ten important books which reveal fundamental patterns in American life and thought and receives incidental training in bibliographical matters, in formulating problems for special investigation, and in group discussion.

American Civilization Curriculums

A student working in American Civilization must decide upon a program which emphasizes history or literature and must consult an official adviser before selecting electives.

Emphasis History

	Semester	
Junior Year	*I*	*II*
American History	3	3
American Literature	3	3
European History	3	3
Electives	6	6
Total	15	15
Senior Year		
American History	3	3
English History	3	3
Conference Course	3	3
Electives	6	6
Total	15	15

Emphasis Literature

Junior Year		
American Literature	3	3
American History	3	3
English Literature	3	3
Electives	6	6
Total	15	15
Senior Year		
American Literature	3	3
English Literature	3	3
Conference Course	3	3
Electives	6	6
Total	15	15

Total numbers of hours, 128 or 136.

A—DIVISION OF BIOLOGICAL SCIENCES

The Division of Biological Sciences is organized to stimulate close coordination between all activities in the field of biology. The Departments of Botany and Entomology are in the College of Agriculture.

Each department within the Division has one or more established curriculums. To meet the demands for technically trained workers in the biological sciences these curricula are designed to give specialized training, particularly during the last two years of college work. They provide, more specifically, the basic knowledge and experience required for (1) teaching in secondary schools; (2) research and regulatory work in federal, state, and municipal departments and bureaus; (3) admission to graduate study in the preparation for college teaching and advanced research; and (4) entrance to the professional schools of medicine, dentistry, and nursing.

The particular professions and lines of work for which each department in this Division prepares its students are outlined in greater detail under the description of each department.

Requirements for Graduation

In addition to the University Requirements and those of the College of Arts and Sciences a student must complete basic courses in Chemistry, Mathematics and Physics.

Department of Bacteriology

The Department of Bacteriology functions with three purposes in view. One of these is to provide fundamental training for those students who choose bacteriology as a major subject. Three major fields of study are provided: (1) applied bacteriology, in preparation for such positions as dairy, sanitary and agricultural bacteriologists in federal, state and commercial laboratories, (2) medical bacteriology, or the more recently recognized specialty of medical technology in relation to hospital, public health and clinic laboratories, and (3) the practical field of food technology. The second objective of the department is to provide desirable courses for those students who are majoring in closely allied departments and desire vital supplementary information. Every effort has been made to plan these courses so that they satisfy the demands of these related departments as well as the needs of those students who have chosen bacteriology as a major. The third purpose of the department is to encourage and foster original thought in the pursuit of research.

The Bacteriology Curriculum

The field of bacteriology is too vast in scope to permit specialization in the early stages of undergraduate study. Accordingly, the applied curriculum outlined below includes the basic courses in bacteriology and allied fields.

The course in *Physiology of Bacteria (Bact. 5)* is required for all bacteriology majors, and should follow *General Bacteriology (Bact. 1). Bacteriology 5* is not required as a prerequisite for upper division courses for majors or minors in other departments provided the student has been introduced to certain aspects of bacteriology, or their equivalent, pertinent to their specialty. *Bacteriology 1,* however, is required.

The sequence of courses in the following curriculum should be pursued as closely as possible although it is realized that some deviation may be necessary. Sufficient latitude is provided in the senior year for the student to obtain several courses that are correlated with his or her particular interests.

All students planning a major in Bacteriology should consult the Head of the Department during the first year concerning his particular field of study and his choice of a minor. The minor field of study shall be chosen only from the biological or physical sciences. Chemistry, as outlined below, is the preferred minor.

	Semester	
Freshman Year	I	II
Eng. 1, 2—Composition and Readings in American Literature	3	3
Fr. 1, 2 or Ger. 1, 2—Elementary French or German	3	3
Soc. 1—Sociology of American Life	3	....
G. & P. 1—American Government	....	3
Bact. 1—General Bacteriology	....	4
Chem. 1, 3—General Chemistry	4	4
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
P. E. 42, 44—Hygiene (Women)	2	2
Physical Activities	1	1
Total	16–17	20–21
Sophomore Year		
Eng. 3, 4—Composition and Readings in World Literature	3	3
Fr. 6, 7 or Ger. 6, 7—Intermediate Scientific French or German	3	3
Hist. 5, 6—History of American Civilization	3	3
Sp. 18, 19—Introductory Speech	1	1
Bact. 5—Physiology of Bacteria	4	....
Bact. 53—Sanitary Bacteriology	....	4
Chem. 31, 32, 33, 34—Elements of Organic Chemistry	3	3
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	17–20	17–20
Junior Year		
Math. 10—Algebra	3	....
Math. 11—Trigonometry	....	3
Bact. 101—Pathogenic Bacteriology	4	....
Bact. 103—Serology, or Bact. 108—Epidemiology and Public Health	....	4–3
Chem. 161, 162, 163, 164—Biochemistry	4	4
Elective	4	6
Total	15	16–17
Senior Year		
Bact. 131—Food Bacteriology	....	4
Bact. 135—Soil Bacteriology, or Bact. 133—Dairy Bacteriology	4	....
Bact. 161—Systematic Bacteriology	....	4
Physics 10, 11—Fundamentals of Physics	4	4
Elective in Chemistry (fulfill minor requirements)	2–4	....
Electives in the Minor and Social Sciences	4	3
Total	14–16	15

Medical Technology Curriculum

This is a professional curriculum intended for those students who desire to prepare for technical work in hospital, clinical and public health laboratories. Specialization in the field of Medical Technology begins in the Sophomore Year and becomes more intense during the Junior Year. Emphasis in this curriculum is upon fundamental courses in Bacteriology, Chemistry and Zoology.

The student who follows this curriculum is encouraged to avail himself of opportunities to work in medical laboratories during the summer months. The optimum plan shall be to place the prospective technologist in a laboratory as an apprentice as soon as his training permits. Plans for the recognition of this apprentice work are being formulated.

	Semester	
Freshman Year	*I*	*II*
Eng. 1, 2—Composition and Readings in American Literature	3	3
Soc. 1—Sociology of American Life	3	....
G. & P. 1—American Government	....	3
Sp. 18, 19—Introductory Speech	1	1
Chem. 1, 3—General Chemistry	4	4
Math. 10—Algebra	3	....
Math. 11—Trigonometry	....	3
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
P. E. 42, 44—Hygiene (Women)	2	2
Physical Activities	1	1
Total	17–18	17–18

Sophomore Year

Eng. 3, 4—Composition and Readings in World Literature	3	3
Fr. 1, 2 or Ger. 1, 2—Elementary French or German	3	3
Bact. 1—General Bacteriology	4	....
Bact. 5—Physiology of Bacteria	....	4
Chem. 31, 32, 33, 34—Elements of Organic Chemistry	3	3
Physics 10, 11—Fundamentals of Physics	4	4
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	18–21	18–21

Junior Year

Fr. 6, 7 or Ger. 6, 7—Intermediate Scientific French or German	3	3
Hist. 5, 6—History of American Civilization	3	3
Bact. 101—Pathogenic Bacteriology	4	....
Bact. 103—Serology	....	4
Chem. 161, 162, 163, 164—Biochemistry	4	4
Zool. 1—General Zoology	4	....
Zool. 12—Histological Technique	....	2
Total	18	16

Senior Year

Bact. 105—Clinical Methods	4	....
Bact. 53—Sanitary Bacteriology	....	4
Bact. 108—Epidemiology and Public Health	....	3
Bact. 133—Dairy Bacteriology	4	....
Zool. 14, 15—Human Anatomy and Physiology	4	4
Elective in Chemistry (to fulfill minor requirements)	4	....
Electives	....	4
Total	16	15

Food Technology

This is a professional curriculum designed to equip the student with an unusually broad knowledge of the basic aspects of food production and handling. In this curriculum are combined many of the fundamentals of bacteriology and chemistry in conjunction with the more technical aspects of food processing. These basic sciences, when supported by the proper electives and by practical experience, will prepare the student for laboratory or supervisory work in food factory operation and research in food industries.

The following curriculum is designed primarily for the student who chooses a major in the technology of plant foods. Certain latitude and substitutions will be permitted those individuals who desire training in the specialty of dairy, fish, poultry and meat products.

The student who selects a major in food technology should plan to avail himself of summer opportunities to visit, as well as work, in food processing plants so as to obtain practical knowledge of commercial operations in conjunction with the prescribed course of study.

	Semester	
Freshman Year	*I*	*II*
Eng. 1, 2—Composition and Readings in American Literature	3	3
Soc. 1—Sociology of American Life	3	....
G. & P. 1—American Government	....	3
Sp. 18, 19—Introductory Speech	1	1
Chem. 1, 3—General Chemistry	4	4
*Bot. 1—General Botany	4	....
Bact. 1—General Bacteriology	....	4
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
P. E. 42, 44—Hygiene (Women)	2	2
Physical Activities	1	1
Total	18–19	18–19

Sophomore Year	*I*	*II*
Eng. 3, 4—Composition and Readings in World Literature	3	3
Hist. 5, 6—History of American Civilization	3	3
Bact. 5—Physiology of Bacteria	4	....
Bact. 53—Sanitary Bacteriology	....	4
Chem. 31, 32, 33, 34—Elements of Organic Chemistry	3	3
*Hort. 8—Vegetable Production	....	4
*Hort. 14—Small Fruits	3	....
M. I. 3, 4—R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	17–20	18–21

---

* Required only in the Technology curriculum for plant foods. D. H. 109 and D. H. 113 are required of those desiring to major in the Technology of dairy products.

	Semester	
Junior Year	*I*	*II*
Fr. 1, 2 or Ger. 1, 2—Elementary French or German	3	3
Bact. 131—Food Bacteriology	....	4
F. Tech. 100—Food Microscopy	3	....
F. Tech. 140—Technology Conference	....	1
Chem. 19—Quantitative Analysis	4	....
Chem. 161, 162, 163, 164—Biochemistry	4	4
Math. 10—Algebra	3	....
Math. 11—Trigonometry	....	3
Total	17	15

Senior Year		
Fr. 6, 7 or Ger. 6, 7—Intermediate Scientific French or German	3	3
Bact. 133—Dairy Bacteriology	4	....
Hort. 55—Commercial Processing	4	....
F. Tech. 120—Food Sanitation	....	3
F. Tech. 140—Technology Conference	1	1
Elective in Chemistry (to fulfill minor requirements)	....	3
Physics 10, 11—Fundamentals of Physics	4	4
Elective	....	3
Total	16	17

ZOOLOGY

The Department of Zoology offers courses which train the student for professional work in several fields: teaching in college and secondary schools, research and regulatory work in the biological bureaus of the United States Government, work in the biological departments of state and city governments and research in industrial laboratories.

Two courses of study have been established as described below. In each of these curricula the fundamental courses are included and ample opportunity is offered for the election of additional courses in the Department of Zoology or related departments so that the student may plan his training toward the particular professional work in which he is interested.

Zoology Curriculum

	Semester	
Freshman Year	*I*	*II*
Eng. 1, 2—Composition and American Literature	3	3
Soc. 1—Sociology of American Life	3	....
G. & P. 1—American Government	....	3
Zool. 2, 3—Fundamentals of Zoology	4	4
Chem. 1, 3—General Chemistry	4	4
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
P. E. 42, 44—Hygiene (Women)	2	2
Physical Activities	1	1
Total	17-18	17-18

Sophomore Year	*Semester I*	*Semester II*
Eng. 3, 4—Composition and World Literature	3	3
H. 5, 6—History of American Civilization	3	3
Zool. 5—Comparative Vertebrate Morphology	4	....
Zool. 20—Vertebrate Embryology	....	4
Math. 10, 11—Algebra, Trigonometry and Analytic Geometry	3	3
Electives	3	3
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	17-20	17-20

Junior Year		
Zool. 108—Animal Histology	4	....
Zool. 106—Histological Technique	....	3
Zool. 104—Genetics	3	....
Zool. 121—Principles of Animal Ecology	....	3
Phys. 10, 11—Mechanics and Heat; Sound, Optic, Magnetism and Electricity	4	4
Modern Language	3	3
Electives	3	3
Total	17	16

Senior Year		
Zool. 102, 103—General Animal Physiology	3	3
Zool. 75, 76—Journal Club	1	1
Speech 18, 19—Introductory Speech	1	1
Modern Language	3	3
Electives	8	8
Total	16	16

Fisheries Biology

The aquatic resources of Maryland offer an excellent opportunity for the study of Fisheries Biology and Marine Zoology. The Chesapeake Bay and its tributaries, representing many habitats, constitute an excellent laboratory for training in these fields and commercial fisheries of the state offer additional opportunity for studies in methods, management and conservation.

The following curriculum prepares the student for specialization in this field. In addition to the courses as outlined, which he will complete at College Park, he is expected to spend part of his summers in study or practical work on the Chesapeake Bay.

Fisheries Biology Curriculum

Freshman Year

	Semester I	Semester II
Eng. 1, 2—Composition and American Literature	3	3
Soc. 1—Sociology of American Life	3	....
G. & P. 1—American Government	....	3
Zool. 2, 3—Fundamentals of Zoology	4	4
Chem. 1, 3—General Chemistry	4	4
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
P. E. 42, 44—Hygiene (Women)	2	2
Physical Activities	1	1
Total	17-18	17-18

Sophomore Year

Eng. 3, 4—Composition and World Literature	3	3
H. 5, 6—History of American Civilization	3	3
Zool. 5—Comparative Vertebrate Morphology	4	....
Zool. 20—Vertebrate Embryology	....	4
Bot. 1, 2—General Botany	4	4
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	15-18	15-18

Junior Year

Zool. 104—Genetics	3	....
Zool. 106—Histological Technique	....	3
Zool. 118—Invertebrate Morphology	4	....
Zool. 121—Principles of Animal Ecology	....	3
Geol. 1—Geology	3	....
Bact. 1—General Bacteriology	....	4
Math. 10, 11—Algebra, Trigonometry and Analytic Geometry	3	3
Modern Language	3	3
Total	16	16

Senior Year

Zool. 102, 103—General Animal Physiology	3	3
Zool. 75, 76—Journal Club	1	1
Zool. 125—Fisheries Biology	3	....
Speech 18, 19—Introductory Speech	1	1
Phys. 10, 11—Mechanics and Heat; Sound, Optics, Magnetism and Electricity	4	4
Modern Language	3	3
Electives	....	4
Total	15	16

Graduate Study in Zoology

It is generally recognized that for greatest success and achievement in scientific fields work at the graduate level is desirable. The Department of Zoology offers courses and facilities for research leading to the Master of Science and Doctor of Philosophy degrees. The particular graduate fields emphasized by the department are: Gentics, Histology, Fisheries and Marine Biology, and Physiology.

For information on graduate courses and requirements, the special catalog of the Graduate School should be consulted.

GENERAL BIOLOGICAL SCIENCES

A curriculum has been prepared for students who are interested in biology but whose interests are not centralized in any one of the biological sciences. The courses as outlined familiarize the student with the general principles and methods of each of the biological sciences.

By the proper selection of courses during the junior and senior years, a student may concentrate his work sufficiently in any of the fields of study to be able to continue in graduate work in that field. Also by a proper selection of electives, the educational requirements of the State Department of Education for certification can be met.

In this curriculum a major and a minor, comprising together not fewer than 45 credits, shall be completed, with at least 12 of these credits in courses for advanced undergraduates and graduates in the Division.

General Biological Sciences Curriculum

Freshman Year	*Semester* I	*Semester* II
Eng. 1, 2—Composition and American Literature	3	3
Soc. 1—Sociology of American Life	3	....
G. & P. 1—American Government	....	3
Zool. 1—General Zoology	4	....
Bot. 1—General Botany	....	4
Chem. 1, 3—General Chemistry	4	4
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
P. E. 42, 44—Hygiene (Women)	2	2
Physical Activities	1	1
Total	17–18	17–18

Sophomore Year	I	II
Eng. 3, 4—Composition and World Literature	3	3
H. 5, 6—History of American Civilization	3	3
Ent. 1—Introductory Entomology	3	....
Bact. 1—General Bacteriology	....	4
Math. 10, 11—Algebra, Trigonometry and Analytic Geometry	3	3
Modern Language	3	3
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	16–19	17–20

Junior Year	Semester I	Semester II
Phy. 10, 11 Mechanics and Heat: Sound, Optics, Magnetism and Electricity	4	4
Modern Language	3	3
Electives (Biological Sciences)	6	6
Electives	2	2
Total	15	15

Senior Year	Semester I	Semester II
Speech 18, 19—Introductory Speech	1	1
Electives (Biological Sciences)	9	9
Electives	5	5
Total	15	15

B—DIVISION OF HUMANITIES

The Division of Humanities is composed of the Departments of Art, Classical Languages, Comparative Literature, English Language and Literature, Modern Languages and Literature, Music, Philosophy and Speech.

This Division has two main functions: (1) to provide for its own major students thorough training in literature, philosophy, languages, and the fine arts: (2) to furnish for students in other Divisions, especially for those taking preprofessional work, background and elective studies in the departments of the Division.

At present the Division offers major and minor work for the Master of Arts and the Doctor of Philosophy degrees in English language and literature and in modern languages and literatures; major work for the Master of Arts may be elected in Comparative Literature and General Linguistics, and minor work in Philosophy. Detailed requirements for these degrees are given under the departmental announcements and in the catalogue of the Graduate School.

Training for the Master of Arts degree is directed especially toward acquainting the candidate with methods of research and the literature in his own fields. For the degree of Doctor of Philosophy, the candidate is required not only to be thoroughly acquainted with his major and minor fields and with the scholarly accomplishments therein, but also to devote himself intensively to a specific research problem in which he shall make an original contribution to human knowledge.

Division Requirements for the Bachelor's Degree

The following requirements in addition to those of the College of Arts and Sciences (including a general average of C, see page 74) should be completed, as far as possible, before the beginning of the junior year.

1. *Philosophy*—three credits.
2. *Psychology*—three credits.

3. *Major and Minor Requirements*—In selecting a major or a minor, a student must have acquired twelve credits in fundamental courses in the field chosen or in a closely related field satisfactory to the department, with an average grade of at least C, before credit will be allowed toward the completion of the major and minor requirements.

   In addition:

   A major shall consist of not fewer than 24 nor more than 40 credits, in addition to the twelve credits required in the Freshman and Sophomore years in one of these fields of study. At least 15 of these credits must be taken in courses listed for advanced undergraduates and graduates.

   A minor shall consist of not fewer than 12 nor more than 20 credits in addition to the twelve credits required in the Freshman and Sophomore years, in one of the above fields of study not selected for the major, or in some other field of study authorized in the College of Arts and Sciences. At least ten of these credits must be taken in courses listed for advanced undergraduates and graduates.

The student must acquire at least 30 credits in courses not included in the major or minor.

MAJOR AND MINOR

Fields of Study

Comparative Literature
English
French
**General Linguistics
German
*Greek
Latin
*Philosophy
Speech
Spanish

Honors in English

Major students who wish to read for honors in English should apply to the Head of the department. The reading may be done in the last two years, but should, if possible, be begun earlier.

C—DIVISION OF PHYSICAL SCIENCES

The Division of Physical Sciences comprises the departments of Astronomy, Chemistry, Geology, Mathematics, and Physics. On the following pages the division outlines a number of curriculums each requiring four

---

** Major only for Master of Arts Degree.

* Not available at present for a major.

years for completion, leading to the degrees of bachelor of science or bachelor of arts together with five year programs in chemistry—chemical engineering and applied physics. The departments of study have developed courses to contribute to the liberal education of students not primarily *interested in science;* to provide the basic knowledge of the physical sciences necessary in so many professions such as agriculture, dentistry, engineering, home economics, medicine, pharmacy, and others; to equip teachers of the physical sciences for secondary schools and colleges; and to train students for professional service as chemists, chemical engineers, geologists, mathematicians, physicists, and statisticians; and to prepare for graduate study and research in the physical sciences.

The fields of knowledge represented by the physical sciences are so vast and their applications are so important that it is impossible to deal adequately with any one in a four-year undergraduate curriculum. Students who aspire to proficiency are therefore encouraged to continue their studies in the graduate years. In the work leading to a Master's degree, the student becomes acquainted with the general aspects of the field. In partial fulfillment of the requirements for the degree of Doctor of Philosophy, the student must demonstrate a command of his chosen field sufficiently great to permit him to make independent investigations and creative contributions.

No degree will be granted to a student in any department of the Division of Physical Sciences whose general average in all courses offered for the degree is below C. To enroll in the Division of Physical Sciences, at the beginning of the junior year a student must select a major in one of the departments and before graduation must complete a major and a cognate minor selected to conform to the requirements of the department in which the major work is done.

The candidate for a baccalaureate degree in the College of Arts and Sciences will be governed by the requirements for that degree established by the University and the College. A student will be considered a major in one of the departments of the Division of Physical Sciences only when he has completed a program approved by the department concerned. The following suggested curriculums outline the general requirements of these departments.

Chemistry

The science of chemistry is so vast in scope that completion of a well-planned course of undergraduate study is necessary before specialization. The curriculum outlined below describes such a course of study. The sequence of courses given should be followed as closely as possible; it is realized, however, that some deviation from this sequence may be necessary toward the end of the program. All of the courses in chemistry listed are required of students majoring in chemistry.

Chemistry Curriculum

Freshman Year

	Semester	
	I	II
Chem. 1, 3—General Chemistry	4	4
Eng. 1, 2—Composition and Readings in American Literature	3	3
Math. 15—College Algebra	3	....
Math. 11 or 17—Trigonometry and Analytic Geometry	....	3-4
G. & P. 1—American Government	3	....
Soc. 1—Sociology of American Life	....	3
Speech 18, 19—Introductory Speech	1	1
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
P. E. 42, 44—Hygiene (Women)	2	2
Physical Activities	1	1
Total—Men	18	18-19
Total—Women	17	17-18

Sophomore Year

Chem. 15, 17—Qualitative Analysis	3	3
Chem. 35, 37—Elementary Organic Chemistry	2	2
Chem. 36, 38—Elementary Organic Laboratory	2	2
Ger. 1, 2—Elementary German	3	3
Math. 20, 21—Calculus	4	4
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total—Men	18	18
Total—Women	15	15

Junior Year

Chem. 21, 23—Quantitative Analysis	4	4
Chem. 141, 143—Advanced Organic Chemistry	2	2
Chem. 142, 144—Advanced Organic Laboratory	2	2
*Eng. 3, 4—Composition and Readings in World Literature	3	3
*Eng. 5, 6—Composition and Readings, Mainly in English Literature	3	3
Ger. 6, 7—Intermediate Scientific German	3	3
Phys. 20, 21	5	5
Total	19	19

Senior Year

H. 5, 6—History of American Civilization	3	3
Chem. 101—Advanced Inorganic Chemistry	....	2
Chem. 187, 189—Physical Chemistry	3	3
Chem. 188, 190—Physical Chemistry Laboratory	2	2
Chem. 146—The Identification of Organic Compounds	2	....
*Chem. 121—Chemical Microscopy	2	....
*Chem. 161, 163—Biochemistry	2	2
*Chem. 148—The Identification of Organic Compounds	....	2
Econ. 31, 32	3	3
Total	15	15

---

* Choose one

Mathematics

This curriculum offers training in the fundamentals of Mathematics in preparation for teaching, industrial work, or graduate work in Mathematics.

Students majoring in mathematics who complete freshman and sophomore courses in mathematics with distinction are eligible to try for honors in mathematics. To receive the honors degree in mathematics, a student must: 1. Complete the curriculum in mathematics with an average grade of B in all subjects; 2. Pass an honors examination in mathematics at the end of the senior year; 3. Write a satisfactory thesis on an assigned topic in mathematics in the senior year. Students who wish to try for honors in mathematics should consult the Head of the department at the conclusion of their sophomore year.

The mathematics curriculum offers two options depending on the choice of electives in the Junior and Senior years.

Pure Mathematics option. Electives in mathematics must include three hours in each of the fields of algebra and geometry.

Applied Mathematics option. Electives in mathematics must include six hours in the fields of algebra and geometry, and the remaining six hours in the field of applied mathematics. Minor electives will be selected from the Physical Sciences or Engineering in consultation with the Head of the department of Mathematics.

Mathematics Curriculum

Freshman Year	*Semester* I	II
Eng. 1, 2—Composition and Readings in American Literature	3	3
Speech 18, 19—Introductory Speech	1	1
Lang. 1, 2—French or German	3	3
G. & P. 1—American Government	3	....
Soc. 1—Sociology of American Life	....	3
*Math. 14—Plane Trigonometry	2	....
Math. 15—College Algebra	3	....
Math. 17—Analytic Geometry	....	4
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
P. E. 42, 44—Hygiene (Women)	2	2
Physical Activities	1	1
Total	18 or 19	17 or 18

Sophomore Year	I	II
Eng. 3, 4—Composition and Readings in World Literature	3	3
Lang. 4, 5—French or German	3	3
Math. 20, 21—Calculus	4	4
Phys. 20, 21—General Physics	5	5
H. 5, 6—History of American Civilization (Women)	3	3
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	19	19

---

* Students who pass an attainment examination in trigonometry with a satisfactory grade are excused from this requirement, and should elect another course in its place.

	Semester	
Junior Year	I	II
Math. 110, 111—Advanced Calculus	3	3
Electives—Mathematics	3	3
Electives—Minor	6	6
H. 5, 6—History of American Civilization (Men)	3	3
Elective (Women)	3	3
Total	15	15

	Semester	
Senior Year	I	II
Math. 114, 115—Differential Equations	3	3
Math. 80, 81—Senior Tutorial	1	1
Electives—Mathematics	3	3
Electives—Minor	6	6
Electives	3	3
Total	16	16

GENERAL PHYSICAL SCIENCES

This general curriculum is offered for students who desire a basic knowledge of the physical sciences without immediate specialization in any one of them. By proper selection of courses in the latter semesters, a student may concentrate in the field of his choice. A number of selections are possible and there is considerable freedom in the choice of electives.

Curriculum for General Physical Sciences

(This curriculum represents only two of the possible selections of courses open to a student majoring in General Physical Science. Beginning students who want to select this field as a major should consult the major advisor before making up their schedules.)

	Semester	
Freshman Year	I	II
Chem 1, 3—General Chemistry or Phys. 10, 11—Fundamentals of Physics	4	4
Eng. 1, 2—Composition and Readings in American Literature	3	3
Math. 15—College Algebra	3	....
Math. 11—Trigonometry and Analytical Geometry	....	3
G. & P. 1—American Government	3	....
Soc. 1—Sociology of American Life	....	3
Speech 18, 19—Introductory Speech	1	1
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
P. E. 42, 44—Hygiene (Women)	2	2
Physical Activities	1	1
Total	17–18	17–18

	Semester	
Sophomore Year	I	II
Chem 1, 3—General Chemistry or Chem. 31, 32, 33, 34—Elements of Organic Chemistry and Laboratory	4–3	4–3
Phys. 50, 51—Applied Mechanics or Phys. 10, 11—Fundamentals of Physics	3–4	3–4
Eng. 3, 4—Composition and Readings in World Literature or Eng. 5, 6—Composition and Readings, mainly in English Literature	3	3
Math. 20, 21—Calculus	4	4
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	15–18	15–18
Junior Year		
Modern Language	3	3
H. 5, 6—History of American Civilization	3	3
Electives in Biological Sciences	4	4
Electives in Physical Sciences	7	7
Total	17	17
Senior Year		
Modern Language	3	3
Electives in Physical Sciences	4	4
Electives in Biological Sciences	4	4
Electives	4	4
Total	15	15

Physics Curriculum

The physics curriculum is designed for students who desire training in the fundamentals of physics in preparation for teaching, graduate work, and for positions in governmental, industrial and biophysical laboratories. In connection with the curriculum suggested below a minor may be chosen to suit the field of study selected. A minor may be taken in biology, chemical engineering, chemistry, civil engineering, electrical engineering, mathematics, mechanical engineering or any allied field. Students interested in applied or engineering physics should minor in one of the fields of engineering. Entering freshmen who may want to select physics as a major should consult the Head of the Physics Department before making up their schedules.

Physics Curriculum

	Semester	
Freshman Year	I	II
Eng. 1, 2—Composition and Readings in American Literature	3	3
Math. 14, 15, 17—Trig., Alg., Anal., Geom.	5	4
G. & P. 1—American Government	3	....
Soc. 1—Sociology of American Life	....	3
Physics, Language, or Chemistry	3–4	3–4
Dr. 5, 6—Mechanical Drawing (Women)	1	1
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
P. E. 42, 44—Hygiene (Women)	2	2
Physical Activities	1	1
Total	17–18	17–18
Sophomore Year		
Eng. 3, 4—Composition and Readings in World Literature	3	3
Math. 20, 21—Differential and Integral Calculus	4	4
Language	3	3
Physics	5	5
H. 5, 6—History of American Civilization (Women)	3	3
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	19	19
Junior Year		
H. 5, 6—History of American Civilization (Men)	3	3
Dr. 5—Mechanical Drawing (Men)	1	1
Physics	5	5
Language, Mathematics, or Chemistry	6–7	6–7
Electives (Women)	5	5
Total	17–18	17–18
Senior Year		
Chemistry, Engineering, Mathematics and Physics	16	16
Total	16	16

D—DIVISION OF SOCIAL SCIENCES

The Division of Social Sciences, in addition to supplying such courses as are required by other divisions and in other colleges of the University, offers opportunities for advanced training in the several fields represented. The Department of Psychology is identified with the development of applied psychology and is in position to supply training in the industrial and clinical phases of the subject. The Department of Sociology provides a course of study preparatory to professional training in social work, prepares students for research positions in several fields of sociology, and for positions in the field of crime and delinquency control. It offers many courses demanded by civil service examinations for certain positions. The Department of History is responsible for a substantial portion of the program in American Civilization. All departments present courses aligned with the teacher-training program represented in the Arts-Education curriculum.

Majors in Economics and Government and Politics are available to students in the College of Arts and Sciences. The curriculums for these departments are in the section of the catalogue dealing with the College of Business and Public Administration.

Each of the departments offers graduate instruction leading to the degrees of Master of Arts and Doctor of Philosophy. These advanced degrees are increasingly required for secondary school teaching and for professional positions in the several fields represented.

Preprofessional Social Service Curriculum

This curriculum comprises a four-year preprofessional program in the College of Arts and Sciences with a concentration in sociology and related subjects, leading to the degree of Bachelor of Arts. The curriculum combines a liberal arts education with a sound foundation for the general field of social service and provides: (1) preprofessional preparation for students planning to pursue graduate professional study in social service; (2) a background for responsible civic leadership in the field of social welfare for students who are not planning a professional social service career but who as citizens will be active in various programs of social welfare and community betterment; (3) basic training for students who may go immediately upon graduation from college into certain social service positions for which graduate professional education is not required. Completion of this curriculum with the B. A. degree meets the educational qualifications for many beginning positions in public welfare, public assistance, social services to individuals and families, social security, and other areas of social service.

The first three years of this curriculum are devoted to a broad liberal education with emphasis on the study of the fundamentals of human association, social motivation, and societal organization. The fourth year includes an introduction to the basic principles, methods, and organization of the social services. Flexibility to meet the varying interests and needs of individual students is provided by the electives in the junior and senior years.

Students who enter this curriculum with advanced standing may be given credit for comparable course work already taken, except that the last year must be completed in residence at this University.

	Semester	
Freshman Year	*I*	*II*
Eng. 1, 2—Composition and Readings in American Literature	3	3
Soc. 1—Sociology of American Life	3	....
G. & P. 1—American Government	....	3
Modern Language	3	3
Mathematics or Natural Science	3	3
Psych. 1—Introduction to Psychology	....	3
L. S. 1—Library Science	1	....
Speech 1—Public Speaking	2	....
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
P. Ed. 42, 44—Hygiene I, II (Women)	2	2
Physical Activities (Men and Women)	1	1
Total	18–19	18–19
Sophomore Year		
Eng. 3, 4 or 5, 6—Composition and Readings in World Literature	3	3
Soc. 2—The Study of Society	3	....
Soc. 13 or 14—Rural Sociology (or Urban Sociology)	....	3
Hist. 5, 6—History of American Civilization	3	3
Modern Language	3	3
Mathematics or Natural Science	3	3
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities (Men and Women)	1	1
Total	16–19	16–19
Junior Year		
Soc. 51—Social Pathology	3	....
Soc. 52—Criminology	....	3
Soc. 62—Introduction to Social Service	3	....
Soc. 186—Sociological Theory	....	3
Econ. 37—Fundamentals of Economics	3	....
G. & P. 2—American National Government	3	....
Electives in related subjects	3	9
Total	15	15
Senior Year		
Soc. 96—Senior Seminar	....	3
Soc. 118—*Community Organization	....	3
Soc. 171—*Family and Child Welfare	3	....
Soc. 173—Social Security	3	....
Soc. 174—*Public Welfare	....	3
Soc. 183—Social Statistics	3	....
Electives in related subjects	6	6
Total	15	15

---

* Supervised field trips and observation of the functioning of representative agencies, institutions, and organizations are required in connection with these courses.

Preprofessional Crime Control Curriculum

This curriculum comprises a four-year preprofessional program in the College of Arts and Sciences, with a major in sociology and a minor in psychology, leading to the degree of Bachelor of Arts. The curriculum combines a liberal arts education with basic training for the field of crime and delinquency prevention and control. It is designed specifically for students preparing for positions in correctional and penal institutions, institutions for juveniles, juvenile courts, probation and parole services, the so-called "area projects," research in juvenile delinquency and criminology, and similar positions.

Students entering this curriculum with advanced standing will be given credit for comparable course work already completed.

	Semester	
Freshman Year	*I*	*II*
Eng. 1, 2—Composition and Readings in American Literature	3	3
Soc. 1—Sociology of American Life	3	....
G. & P. 1—American Government	....	3
Modern Language	3	3
Speech 1—Public Speaking	2	....
Zool. 1—General Zoology	4	....
Psych. 1—Introduction to Psychology	....	3
Elective	....	3
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
P. E. 42, 44—Hygiene (Women)	2	2
Physical Activities (Men and Women)	1	1
Total	18–19	18–19

Sophomore Year		
Eng. 3, 4—Composition and Readings in World Literature	3	3
Hist. 5, 6—History of American Civilization	3	3
Modern Language	3	3
Zool. 14, 15—Human Anatomy and Physiology	4	4
Soc. 2—The Study of Society	3	....
Soc. 52—Criminology	....	3
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities (Men and Women)	1	1
Total	17–20	17–20

Junior Year	Semester I	Semester II
Soc. 51—Social Pathology	3	....
Soc. 62—Introduction to Social Service	3	....
Soc. 153—Juvenile Delinquency	3	....
Soc. 154—*Crime and Delinquency Prevention	....	3
Soc. 183—Social Statistics	3	....
Soc. 186—Sociological Theory	....	3
B. A. 10, 11—Organization and Control	2	2
Psych. 17—Mental Hygiene	3	....
Psych. 170—Abnormal Psychology	....	3
Electives	....	6
Total	17	17

Senior Year	Semester I	Semester II
Soc. 96—Senior Seminar	....	3
Soc. 114—The City	3	....
Soc. 118—*Community Organization	....	3
Soc. 145—Social Control	3	....
Soc. 156—*Institutional Treatment of Criminals and Delinquents	....	3
Psych. 108—Child Psychology	3	....
Psych. 160—Psychology of Personnel	3	....
Psych. 172—Psychological Tests and Measurements	....	3
Electives	3	3
Total	15	15

COMBINED PROGRAM IN ARTS AND LAW

The School of Law of the University requires two years of academic credit for admission to the school.

The University offers also a combined program in arts and law leading to the degrees of bachelor of arts and bachelor of laws. Students pursuing this combined program will spend the first three years in the College of Arts and Sciences at College Park. During this period they will complete the prescribed curriculum in prelegal studies as outlined below, or a total of 106 semester hours for men and 98 for women, and they must complete the requirements for graduation, as indicated below. If students enter the combined program with advanced standing, at least the third full year's work, i.e. 30 semester hours of credit—must be completed in residence at College Park. Upon the successful completion of one year of full-time law courses in the School of Law in Baltimore, the degree of bachelor of arts may be awarded on the recommendation of the Dean of the School of Law, and provided the student has earned at least a total of 120 credits exclusive of military science and physical activities with a C average. The degree of bachelor of laws may be awarded upon the completion of the combined program.

---

* Supervised field trips and observation of the functioning of representative agencies, institutions, and organizations are required in connection with these courses.

Arts-Law Curriculum

	Semester I	Semester II
Freshman Year		
Eng. 1, 2—Composition and Readings in American Literature	3	3
Science or Mathematics	3	3
G. & P. 1—American Government or Soc. 1—Sociology of American Life	3	3
Foreign Language	3	3
Speech 1, 2—Public Speaking	2	2
L. S. 1, 2—Library Methods	1	1
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
P. Ed.—Hygiene I, II (Women)	2	2
Total	18–19	18–19
Sophomore Year		
Eng. 3, 4—Composition and Readings in World Literature	3	3
Econ. 31, 32—Principles of Economics	3	3
Hist. 5, 6—History of American Civilization	3	3
Science or Mathematics	3	3
Foreign Language	3	3
M. I.—3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	16–19	16–19
Junior Year		
G. & P. 7, 8—Comparative Government	2	2
Hist. 135, 136—Constitutional Hist. of the U. S.	3	3
Psych. 1—Introduction to Psychology	3	....
Psych. 14—Applied Psychology	....	3
Soc. 135—Sociology of Law	....	3
Econ. 140—Money and Banking	3	....
Econ. 160—Labor Economics	3	....
P. A. 180—Government and Business	....	3
*Electives	2	2
Total	16	16

Senior Year—Taken in Law School

PREPROFESSIONAL CURRICULA

FIVE-YEAR COMBINED ARTS AND NURSING

The first two years of this curriculum comprising a minimum of 60 semester hours exclusive of hygiene and physical activities, are taken in the College of Arts and Sciences at College Park and the professional training is taken in the School of Nursing of the University in Baltimore or in the Training School of Mercy Hospital, Baltimore.

In addition to the Diploma in Nursing, the degree of Bachelor of Science in Nursing may, upon the recommendation of the Director of the School of

---

*Pre-law students who expect to engage in income tax practice should take a year at least of accounting.

Nursing, be granted at the end of the professional training. Full details regarding this curriculum may be found in the section of the catalog dealing with the School of Nursing.

A student may enter this combined curriculum with advanced standing but the second year, consisting of a minimum of 30 credits, exclusive of physical training, must be completed in College Park and the professional training must be completed in the school indicated above.

In order to receive the Bachelor of Science degree the student must fulfill the grade requirements of the university.

Arts Nursing Curriculum

Freshman Year	*Semester* I	*Semester* II
Eng. 1, 2—Composition and American Literature	3	3
Soc. 1—Sociology of American Life	3	....
G. & P. 1—American Government	....	3
Chem. 11, 13—General Chemistry	3	3
L. S. 1, 2—Library Methods	1	1
Modern Language	3	3
Speech 18, 19—Introductory Speech	1	1
P. E. 42, 44—Hygiene	2	2
Physical Activities	1	1
Total	17	17

Sophomore Year	I	II
Eng. 3, 4—Composition and World Literature	3	3
H. 5, 6—History of American Civilization	3	3
Zool. 1—General Zoology	4	....
Bact. 1—General Bacteriology	....	4
Psych. 1—Introduction to Psychology	3	....
Econ. 37—Fundamentals of Economics	....	3
Modern Language	3	3
Physical Activities	1	1
Total	17	17

PREMEDICAL CURRICULA

Two courses of a study preparatory to entrance to medical school are offered, the three-year combined curriculum and the two-year curriculum.

Premedical Three-Year Curriculum

This course, which consists of three years of training in the College of Arts and Sciences, is recommended for admission to the School of Medicine of the University of Maryland. It also meets the requirements prescribed by the Council on Medical Education of the American Medical Association.

This curriculum offers to the student a combined program leading to the degrees of Bachelor Science and Doctor of Medicine. The preprofessional training is taken in residence in the College of Arts and Sciences at College Park, and the professional training in the School of Medicine in Baltimore.

Students who have elected the combined program of Arts and Sciences and Medicine may, upon recommendation of the Dean of the School of Medicine, be granted the degree of Bachelor of Science by the College of Arts and Sciences. To qualify for this degree at least 90 semester credits exclusive of required work in military science and physical education in this college and the first year of the School of Medicine must have been completed so that the quantitative requirements of 120 semester hours are met. The qualitative grade requirements of the University must also be fulfilled. The degree will be granted at the commencement following the completion of the student's second year in medical school.

A student may enter this combined curriculum with advanced standing, but the last year of the preprofessional training, consisting of a minimum of 30 credits, exclusive of physical training and military instruction, must be completed in College Park and the professional training must be completed in the University of Maryland School of Medicine in Baltimore.

Students who expect to qualify for the combined degree must complete the work as outlined in the curriculum. Changes may be made only when authorized by the Dean of the College of Arts and Sciences.

Premedical Three Year Curriculum

Freshman Year	*Semester I*	*Semester II*
Eng. 1, 2—Composition and American Literature	3	3
Soc. 1—Sociology of American Life	3	....
G. &. P. 1—American Government	....	3
Zool. 2, 3—Fundamentals of Zoology	4	4
Math. 10, 11—Algebra, Trigonometry and Analytic Geometry	3	3
Chem. 1, 3—General Chemistry	4	4
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
P. E. 42, 44—Hygiene (Women)	2	2
Physical Activities	1	1
Total	20–21	20–21

Sophomore Year	*Semester I*	*Semester II*
Eng. 3, 4—Composition and World Literature	3	3
Zool. 5—Comparative Vertebrate Morphology	4	....
Zool. 20—Vertebrate Embryology	....	4
Chem. 35, 36, 37, 38—Elementary Organic Chemistry	4	4
Modern Language	3	3
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	15–18	15–18

	Semester	
Junior Year	*I*	*II*
Chem. 181, 182, 183, 184—Elements of Physical Chemistry	3	3
Phys. 10, 11—Mechanics and Heat; Sound, Optics, Magnetism and Electricity	4	4
H. 5, 6—History of American Civilization	3	3
Modern Language	3	3
Speech 18, 19—Introductory Speech	1	1
Electives (Biological Sciences)	4	4
Total	18	18

Senior Year

The curriculum of the first year of the School of Medicine of the University of Maryland is accepted by the College of Arts and Sciences as the fourth year of academic work toward the degree.

If at the beginning of the Senior Year the student decides to postpone his entrance to Medical School and to remain in the College of Arts and Sciences and complete work for the Bachelor Degree he may choose a major and minor in any departments in which he has completed the necessary underclass requirements. Because of the general nature of the first three years of this curriculum, the student has open to him a wide choice of departments in which he may specialize.

Premedical Two-Year Curriculum

This curriculum meets the requirements of the Council on Medical Education of the American Medical Association for entrance to Class A Medical Schools.

	Semester	
Freshman Year	*I*	*II*
Eng. 1, 2—Composition and American Literature	3	3
Soc. 1—Sociology of American Life	3	....
G. & P. 1—American Government	....	3
Zool. 2, 3—Fundamentals of Zoology	4	4
Chem. 1, 2—General Chemistry	4	4
Math. 10, 11—Algebra, Trigonometry and Analytic Geometry	3	3
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
P. E. 42, 44—Hygiene (Women)	2	2
Physical Activities	1	1
Total	20–21	20–21

Sophomore Year		
Eng. 3, 4—Composition and World Literature	3	3
H. 5, 6—History of American Civilization	3	3
Chem. 35, 36, 37, 38—Elementary Organic Chemistry	4	4
Phys. 10, 11—Mechanics and Heat; Sound, Optics, Magnetism and Electricity	4	4
Modern Language	3	3
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	18–21	18–21

PREDENTAL CURRICULUM

Students entering the College of Arts and Sciences who desire to prepare themselves for the study of dentistry are offered the following curriculum, which meets the predental requirements of the American Association of Dental Colleges. If the student decides to continue his college training and complete work for the Bachelor of Science degree, this curriculum will constitute the first two years of his college work. The courses chosen during the Junior and Senior years must meet the college and university requirements for graduation.

Predental Two-Year Curriculum

	Semester	
Freshman Year	*I*	*II*
Eng. 1, 2—Composition and American Literature	3	3
Soc. 1—Sociology of American Life	3	....
G. & P. 1—American Government	....	3
Zool. 2, 3—Fundamentals of Zoology	4	4
Chem. 1, 3—General Chemistry	4	4
Math. 10, 11—Algebra, Trigonometry and Analytic Geometry	3	3
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	21	21
Sophomore Year		
Eng. 3, 4—Composition and Literature	3	3
H. 5, 6—History of American Civilization	3	3
Chem. 35, 36, 37, 38—Elementary Organic Chemistry	4	4
Physics 10, 11—Mechanics and Heat; Sound, Optics, Magnetism and Electricity	4	4
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	18	18

PREVETERINARY CURRICULUM

Students who desire to prepare themselves for the study of Veterinary Science are offered, by the College of Arts and Sciences, a curriculum which meets the entrance requirements of colleges of veterinary science. The course is essentially that required of premedical students as outlined in Curriculum II on page 103.

THE COLLEGE OF BUSINESS AND PUBLIC ADMINISTRATION

JOHN FREEMAN PYLE, *Dean*

The University of Maryland is in an unusually favorable location for students of Business and Public Administration and Economics. Downtown Washington is only twenty-five minutes away in one direction, while the Baltimore business district is less than an hour in the other. There is frequent transportation service from the University gates to each city. Special arrangements are made to study commercial, manufacturing, exporting, and importing agencies and methods in Baltimore, assistance is given qualified students who wish to obtain a first hand glimpse of the far-flung economic activities of the national government or to utilize the libraries, government departments, and other facilities available in Washington.

ORGANIZATION OF THE COLLEGE OF BUSINESS AND PUBLIC ADMINISTRATION

The College comprises two major divisions, viz. the Division of Business Administration and the Division of World Economics and Public Affairs. Each division has departments as indicated below.

A. Division of Business Administration
    I. Department of Business Organization and Administration
        1. Accounting and Statistics
        2. Financial Administration
        3. Industrial Administration
        4. Marketing Administration
            (a) Advertising
            (b) Foreign Trade and International Finance
            (c) Retail Store Management
            (d) Sales Management
        5. Personnel Administration
        6. Transportation Administration
            (a) Airport Management
            (b) Traffic Management
    II. Bureau of Business Research
    III. Department of Economics
    IV. Department of Office Techniques and Management
        1. Secretarial Training
        2. Office Management

B. Division of World Economics and Public Affairs
    I. Department of Government and Politics
    II. Department of Foreign Affairs and International Relations
    III. Department of Geography

Aims

The College of Business and Public Administration offers training designed to prepare young men and women for service in business firms, governmental agencies, cooperative enterprises, labor unions, small business units, and other organizations requiring effective training in administrative skills and techniques, and for the teaching of business subjects and economics in high schools and colleges. It supplies scientific administrative training to students and prospective executives on a professional basis comparable to university training in the other professional fields. Administration is regarded as a profession, and the College of Business and Public Administration prepares its students for this profession by offering courses of instruction which present general principles and techniques of management and administration and bring together in systematic form the experiences and practices of business firms and governmental units. This plan of education does not displace practical experience, but supplements and strengthens it by shortening the period of apprenticeship otherwise necessary, and by giving a broad and practical knowledge of the major principles, policies, and methods of administration.

During the first half of the college study programs the student secures a broad foundation upon which to base the professional and the more technical courses offered in the last half of the course. The managerial and operating points of views are stressed in the advanced courses in production, marketing, labor, finance, real estate, insurance, accounting, secretarial training and public administration. The purpose of the training offered is to aid the student as a prospective executive in developing his ability to identify and to solve administrative and managerial problems; and to adjust himself and his organization, policies, and practices to changing social, political and economic situations.

The aim of the college is to present and illustrate such sound principles of management as are applicable to both big business and small business. Large-scale business, because of its possible economies will be expanded in some industries under certain well-known conditions. There are, on the other hand, industries and many situations which still call for the small business. If these small-scale businesses are to be operated with profit to the owners and with satisfactory and economical service to the public, it is imperative that authentic principles of administration be applied to them. Sound principles of ethical conduct are emphasized at all times throughout the various courses.

The primary aim of collegiate education for government and business service is to train for effective management. The College of Business and Public Administration, University of Maryland, was established to supply effective training in administration to the young men and women whose task will be the guiding of the more complex business enterprises and governmental units resulting from industrial, social and political development and expansion. This statement does not mean that the graduate may expect to secure a major executive position upon graduation. He will, on the contrary, usually be required to start near the well publicized "bottom" of the ladder and work his way up through a number of minor positions. He will, however, be able to move up at a faster rate if he has taken full advantage of the opportunities offered by the college in developing his talents and in acquiring technical and professional information, point of view, skills, and techniques.

Graduation Requirement

A minimum of 120 semester hours of credit in courses suggested by the College in addition to the specified courses in military science, physical activities and hygiene are required for graduation. The student is required to have a "C" average for all courses used in meeting the quantitative graduation requirements. A student who receives the mark of D in more than one-fourth of his credits must take additional courses or repeat courses until he has met these requirements. The time required to complete the requirements for the bachelors degree for the average student is eight semesters. A superior student, by carrying more than the average load, can complete the work in a shorter period of time.

Degrees

The University confers the following degrees on students of Business and Public Administration: Bachelor of Science, Master of Business Administration, and Doctor of Philosophy. (See bulletin of Graduate School for graduate rules and regulations.)

Each candidate for a degree must file in the office of the Registrar on a date announced for each semester a formal application for a degree. Candidates for degrees must attend a convocation at which degrees are conferred and diplomas are awarded. Degrees are conferred in absentia only in exceptional cases.

Junior Requirement

To be classified as a junior a student have have earned 58 semester hours of his freshman and sophomore requirements with an average grade of at least "C", plus the required work in military science, hygiene and physical activities for the freshman and sophomore years. If a student has better than a "C" average and lacks a few credits of having the total of 58, he may be permitted to take certain courses numbered 100 and above providing he has the prerequisites for these courses and the consent of the Dean.

Senior Residence Requirement

After a student has earned acceptable credit to the extent of 90 semester hours exclusive of the required work in military science, physical activities, and hygiene, either at the University of Maryland or elsewhere, he must earn a subsequent total of at least 30 semester hours with an average grade of "C" or better at the University of Maryland. No part of these credits may be transferred from another institution.

Programs of Study

The College offers programs of study in economics, business administration, secretarial training, public administration, government and politics, and a number of combination curriculums, e.g., business administration and law, commercial teaching, industrial education, chemistry, agriculture, or basic engineering courses. Research is emphasized throughout the various programs.

Professional Objectives

The executive manager or administrator in modern business enterprises and governmental units and agencies should have a clear understanding of:

(a) the business organizations and institutions which comprise the business world;

(b) the political, social, and economic forces which tend to limit or to promote the free exercise of his activities; and

(c) the basic principles which underlie the efficient organization and administration of a business or governmental enterprise.

In addition, the executive or the prospective executive should:

(a) be able to express his thoughts and ideas in correct and concise English;

(b) have a knowledge of the fundamental principles of mathematics and the basic sciences, such as physics, chemistry, biology, and geography;

(c) have a knowledge of the development of modern civilization through a study of history, government, and other social science subjects;

(d) have a sympathetic understanding of people gained through a study of psychology, sociology, and philosophy.

If the executive is to be successful in solving current business and governmental problems, he should be skilled in the scientific method of collecting, analyzing, and classifying pertinent facts in the most significant manner, and then, on the basis of these facts, be able to draw sound conclusions and to formulate general principles which may be used to guide his present and future conduct. In other words, probably the most important qualities in a successful executive are:

(a) the ability to arrive at sound judgments;

(b) the capacity to formulate effective plans and policies, and the imagination and ability to devise organizations, methods, and procedures for executing them.

Facilities Furnished

The teaching staff and the curriculums of the College of Business and Public Administration have been selected and organized for the purpose of providing a type of professional and technical training that will aid the capable and ambitious student in developing his potential talents to their full capacity.

The college study programs on both the undergraduate and graduate levels presuppose effective training in English, history, government, language, science, and mathematics.* The program of study for any individual student may be so arranged as to meet the needs of those preparing for specific lines of work, such as accounting, advertising, banking, foreign trade, industrial administration, market administration, personnel administration, real estate practice, insurance, government employment, secretarial work, teaching, and research.

Advisory Councils

In order to facilitate the prompt and continuous adjustment of courses, curriculums, and instructional methods to provide the training most in demand by industry and commerce; and in order constantly to maintain instruction abreast of the best current practice, the advice and suggestions of business men and public officials are constantly sought from outstanding leaders in each major field of business activity. Each council has its own particular interest to serve, such as advertising, marketing, or finance; and the viewpoint and suggestions of these business men are proving to be invaluable in developing the instructional and research program of the College.

STUDY PROGRAMS IN THE COLLEGE OF BUSINESS AND PUBLIC ADMINISTRATION

A student in the College can so arrange his grouping and sequence of courses as to form a fair degree of concentration in one of the Departments or divisions. When, however, he wishes to become a specialist in any one of the departments, he should plan to continue his studies on to the graduate level, working toward either the Master's or the Doctor of Philosophy degree.

A. THE DIVISION OF BUSINESS ORGANIZATION AND ADMINISTRATION

Business organizations are set up primarily for the purpose of *producing* and *distributing* goods and services. Modern business administration requires a knowledge of and skill in the use of effective tools for the control of organizations, institutions, and operations. The curriculums of the Department of Business Organization and Administration emphasize the principles and problems of the development and the use of policies and organizations, and the methods, techniques and procedures of execution, in other words, the essence of Administration and Management.

The programs of study in the Department of Business Administration are so arranged as to facilitate concentrations according to the major functions of business organization. This plan is not, however, based on the assumption that these major divisions are independent units, but rather that each is closely related and dependent on the others. Every student in Business Administration, therefore, is required to complete satisfactorily a minimum number of required basic and core subjects in economics and in each of the major functional fields. Each graduate upon completion of the requirements for the bachelor's degree finds himself well grounded in the theory and practice of administration. There are five commonly recognized major business functions, viz: production, marketing, finance, labor relations, and control.

---

* The major portion of this training is usually secured in the four years of high school and the first two years of college.

The function of control may be thought of as comprising two divisions, viz. internal and external. Internal control has to do with men, materials, and operations. External control is secured through the force of laws and courts, board and commission decisions, also through the influence of custom and public opinion. Management endeavors to make adequate adjustments to these forces. Courses in law and public administration, for example, aid in giving the student an understanding of the problems, devices, and methods of external or "social" control.

Study programs of the Department of Business Organization and Administration furnish an opportunity for a small amount of concentration in one of the major sections during the undergraduate period. The basis of these curriculums is the general study program.

The following suggested study programs will aid the thoughtful student in planning his concentration according to his natural aptitudes and the line of his major interest:

The General Curriculum in Administration

This curriculum is set up on an eight semester basis which corresponds to the traditional four-year course that leads to a bachelors degree. A student may complete the full course in a shorter period of time by attending summer sessions. A superior student may, however, complete the course in a shorter period of time by carrying a heavier load each semester.

FRESHMAN AND SOPHOMORE REQUIREMENTS

During the first half of the program of study each student is expected to complete the following basic and core subjects, except as indicated in a particular curriculum:

Required Courses:	*Semester Hours*
English, Composition and American and World Literature	12
Mathematics*	6
Economic Resources	4
Economic Developments	4
Organization and Control	4
American Government	3
Sociology of American Life	3
History of American Civilization	6

---

* Students who have had two or more years of high school algebra will ordinarily omit Math. 5 and take Math. 6 only, other students will take both Math. 5 and 6.

Military Training and Physical Activities for Men	16
Hygiene and Physical Activities for Women	8
Accounting	8
Principles of Economics	6
Total specified requirements	64–72
	68–76

A minimum of forty per cent of the total number of credits required for graduation must be in subjects with designations other than Business Administration; forty per cent must be in Business Administration subjects, the other twenty per cent may be in either group or comprise a combination of the two groups of subjects.

Freshmen who expect to make a concentration in foreign trade, or who plan to enter public service abroad, should elect an appropriate foreign language.

JUNIOR AND SENIOR REQUIREMENTS

During the junior and senior years each student is required to complete in a satisfactory manner the following specified courses unless the particular curriculum being followed provides otherwise:

Econ. 140—Money and Banking	3
B. A. 140—Financial Management	3
Econ. 150—Marketing Principles and Organization	3
B. A. 150—Marketing Management	3
Econ. 160—Labor Economics	3
B. A. 160—Personnel Management	3
B. A. 130—Elements of Statistics	3
B. A. 180, 181—Business Law I, II	8
Total	29

The remaining credits for the juniors and seniors may be used to meet the requirements for one of the special concentration programs, for example, in Economics, Natural and Human Resources, Public Administration, Foreign Service, Secretarial Training, Commercial Teaching, and in the fields of Business Administration, such as: Accounting and Statistics, Production Administration, Marketing, Advertising, Retailing, Purchasing, Foreign Trade, Labor Relations, Real Estate, Insurance, Investment, and general Finance. Juniors and seniors may elect appropriate Secretarial Training courses.

Combined Administration and Law Program

When a student elects the combination Administration-Law curriculum, he must complete in a satisfactory manner the specific requirements listed for the first three years in the College of Business and Public Administration plus enough electives to equal a minimum of 90 credits exclusive of military science, physical activities and hygiene, with an average grade of at least "C". The last year of college work before entering the Law School must be done in residence at College Park. The Bachelor of Science degree from the College of Business and Public Administration is conferred upon the satisfactory completion of the first year in the Law School and the recommendation of the Dean of the Law School. Business Law cannot be used as credit in this combined curriculum.

I. BUSINESS ORGANIZATION AND ADMINISTRATION

The program of study in the College of Business and Public Administration are so arranged as to facilitate concentrations according to the major function of business organization. This plan is not, however, based on the assumption that these major divisions are independent units, but rather that each is closely related and dependent on the others. Every student in the college, therefore, is required to complete satisfactorily a minimum number of required basic and core subjects in economics and in each of the major functional fields. Each graduate upon completion of the requirements for the bachelor's degree finds himself well grounded in the theory and practice of administration. There are five commonly recognized major business functions, viz: production, marketing, finance, labor relations, and control.

The function of control may be thought of as comprising two divisions, viz: internal and external. Internal control has to do with men, materials, and operations. External control is secured through the force of law, court, board and commission decisions, custom, and public opinion. Management endeavors to make adequate adjustments to these forces. Courses in law and public administration, for example, aid in giving the student an understanding of the problems, devices, and methods of external or "social" control.

Study programs of the Division of Business Administration furnish an opportunity for a small amount of concentration in one of the major sections during the undergraduate period. The basis of these curriculums is the general study program.

The following suggested study programs will aid the thoughtful student in planning his concentration according to his natural aptitudes and the line of his major interest:

The General Curriculum in Administration

This curriculum is set up on an eight semester basis which corresponds to the traditional four-year course that leads to a bachelor's degree. A student may complete the full course in a shorter period of time by attending summer sessions. A superior student may, however, complete the course in a shorter period of time by carrying a heavier load each semester.

	Semester	
Freshman Year	*I*	*II*
Econ. 1, 2—Economic Resources of the World	2	2
Econ. 4, 5—Economic Developments	2	2
Eng. 1, 2—Composition and Readings in American Literature	3	3
B. A. 10, 11—Organization and Control	2	2
Mathematics 5,* and 6	3	3
G. & P. 1——American Government (or Sociology of American Life)	3	....
Soc. 1—Sociology of American Life (or American Government)	....	3
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
P. E. 42, 44—Hygiene (Women)	2	2
Physical Activities (Men and Women)	1	1
Total	18–19	18–19
Sophomore Year		
Eng. 3, 4 or 5, 6—Composition and Readings in World Literature	3	3
Econ. 31, 32—Principles of Economics	3	3
B. A. 20, 21—Principles of Accounting	4	4
Speech 18, 19—Introductory Speech	1	1
H. 5, 6—History of American Civilization	3	3
Electives (Girls)	3	3
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities (Men and Women)	1	1
Total	17–18	17–18
Junior Year		
Econ. 140—Money and Banking	3	....
B. A. 140—Financial Management	....	3
B. A. 130—Elements of Business Statistics	3	....
Econ. 150—Marketing Principles and Organization	3	....
B. A. 150—Marketing Management	....	3
Econ. 160—Labor Economics	3	....
B. A. 160—Personnel Management	....	3
Electives in Bus. & Pub. Adm., Economics, or other approved subjects	3	6
Total	15	15
Senior Year		
B. A. 180, 181—Business Law I, II	4	4
Econ. 131—Comparative Economic Systems	3	....
Econ. 171—Economics of American Industry	....	3
P. A. 140—Public Finance and Taxation	3	....
P. A. 180—Government and Business	....	3
Electives in Bus. & Pub. Adm., Economics, or other approved subjects	6	6
Total	16	16

---

* Students who have had two or more years of high school algebra may be excused from Math. 5.

Electives may be chosen under the direction of a faculty advisor from courses in Accounting, Statistics, Geography, Public Administration, Secretarial Training, Education, Home Economics, Natural Science, or other courses that will aid the student in preparing for his major objective. The electives indicated in the General Course are provided so that students can arrange their schedules, under the guidance of a faculty adviser, in such a way as to secure a concentration or major when desired in:

1. Accounting and Statistics
2. Financial Administration
3. Industrial Administration
4. Marketing Administration
5. Personnel Administration
6. Transportation Administration

There are prescribed curriculums for Accounting, Financial Administration, Foreign Trade and International Relations, and for Secretarial Training.

1. Accounting and Statistical Control Study Program

Internal control in modern business and governmental organizations is a major over-all administrative function. The rapid growth in size and complexity of current governmental units and business enterprises has emphasized the importance of the problems of control in management. In order to control intelligently and effectively the manifold activities of these units, it is necessary to establish an organization, formulate policies, and develop methods of procedures. In order to perform satisfactorily these managerial activities, it is necessary to have pertinent facts concerning the operations of the various units, divisions, and departments. It is the function of the accounting and statistical departments to secure, analyze, classify, and, to a limited extent, interpret these facts.

This study program is designed to give the student a broad training in administrative control supplemented by specific technical training in the problems, procedures, methods and techniques of accounting and statistics. If the program is followed diligently, the student may prepare himself for a career as a public accountant, tax specialist, cost accountant auditor, budget officer, comptroller, credit manager, or treasurer.

The following study program provides courses for those wishing to concentrate in this important field:

Students who select a concentration in accounting and statistics follow the general study program in the freshman and sophomore years.

Junior Year	*Semester I*	*Semester II*
B. A. 120—Intermediate Accounting	5	....
B. A. 121—Cost Accounting	....	4
B. A. 122—Auditing Theory and Practice	....	4
B. A. 130—Elements of Business Statistics	3	....
Econ. 140—Money and Banking	3	....
B. A. 140—Financial Management	....	3
Econ. 150—Marketing Principles and Organization	3	....
B. A. 150—Marketing Management	....	3
Econ. 160—Labor Economics	3	....
B. A. 160—Personnel Management	....	3
Total	17	17

Senior Year	*Semester I*	*Semester II*
B. A. 123—Income Tax Accounting	4	....
B. A. 124—Advanced Accounting Theory and Practice	....	4
B. A. 125, C. P. A. Problems	3	....
B. A. 180, 181, Business Law	4	4
B. A. 183, Business Law for Accountants	....	2
Electives	6	6
Total	17	16

The student interested in this field may select electives with the aid of his advisor, from the following list of subjects such courses as will best meet his needs.

- P. A. 114—Public Budgeting (3)
- B. A. 129—Apprenticeship in Accounting (0)
- B. A. 132, 133—Advanced Business Statistics (3, 3)
- B. A. 165—Office Management (3)
- B. A. 166—Business Communications (3)
- B. A. 143—Credit Management (3)
- P. A. 124—Governmental Accounting (3)
- B. A. 220—Managerial Accounting (3)
- B. A. 299—Thesis, 3-6 hours (arranged)
- B. A. 221, 222—Seminar in Accounting (arranged)
- B. A. 228—Research in Accounting (arranged)
- B. A. 229—Studies of special problems in the fields of Statistical Control (arranged)

2. Financial Administration

A nation with a highly developed industrial system requires an effective financial organization. Production and marketing activities of business enterprises must be financed; a large volume of consumer purchases depend on credit; and the activities of local, state, and federal governments depend, in large part, on taxation and borrowing. To meet these needs a complicated structure of financial institutions, both private and public, has evolved together with a wide variety of financial instruments. The methods used are equally varied and complicated. Since the financing service is so pervasive throughout our economic life and because it is an expense which must be borne by the ultimate purchaser, the management of the finance function is endowed with a high degree of public interest.

This study program is designed to give the student fundamental information concerning financing methods, institutions, and instruments; and to aid him in developing his ability to secure and evaluate pertinent facts, and to form sound judgments with reference to financial matters. Through a wise selection of subjects the student who selects this curriculum may prepare himself for positions in the commercial, savings, and investment banking fields, investment management; corporate financial management; real estate financing; and insurance. A student may qualify himself to enter government service, e.g., in departments regulating banking operations, international finance, the issuance and sales of securities, and a number of financial corporations owned and operated or controlled by the government.

Students wishing to form a concentration in Financial Administration should follow the general study program for the freshman and sophomore years, the program for the junior and senior years is outlined below.

	Semester	
Junior Year	*I*	*II*
Econ. 140—Money and Banking	3	....
B. A. 140—Financial Management	....	3
B. A. 130—Elements of Business Statistics	3	....
B. A. 120—Intermediate Accounting	5	....
B. A. 123—Income Tax Accounting	....	4
Econ. 150—Marketing Principles and Organization	3	....
B. A. 150—Marketing Management	....	3
Electives in Economics, Business and Public Administration	3	5
Total	17	16
Senior Year		
B. A. 180, 181—Business Law	4	4
B. A. 141—Investment Management	3	....
B. A. 143—Credit Management	3	....
B. A. 160—Personnel Management	....	3
Econ. 160—Labor Economics	3	....
B. A. 165—Office Management	....	3
Electives in Finance	3	6
Total	16	16

Selection of electives may be made with the aid of the advisor from the following list of subjects:

B. A. 142—Banking Policy and Practice (3)
B. A. 145—Property, Casualty, and Liability Insurance.
B. A. 147—Business Cycle Theory (3)
Econ. 141—Theory of Money, Credit and Prices (3)
B. A. 146—Real Estate Financing and Appraisals (2)
P. A. 140—Public Finance and Taxation (3)
P. A. 141—International Finance and Exchange (3)
Econ. 241—Seminar in Money, Credit and Prices (arranged)
B. A. 240—Seminar in Financial Organization and Management (3)
B. A. 249—Studies of Special Problems in the Field of Financial Administration (arranged)

3. Industrial Administration

This curriculum is designed to acquaint the student with the problems of organization and control in the field of industrial management. Theory and practice with reference to organization, policies, methods, processes, and techniques are surveyed, analyzed, and criticized. The student is required to go on inspection trips, and when feasible is expected to secure first-hand information through both observation and participation. He should be familiar with the factors that determine plant location and layout, types of buildings, and the major kinds of machines and processes utilized; he should understand effective methods and devices for the selection and utilization of men, materials and machines.

The courses, in addition to those required of all students in the college, which will aid the undergraduate student in preparing himself for a useful place in this field of effort are:

B. A. 121—Cost Accounting (4)
B. A. 122—Auditing (4)
B. A. 132, 133—Advanced Business Statistics (3, 3)
B. A. 153—Purchasing Management (3)
B. A. 163—Industrial Relations (3)
B. A. 165—Office Management (3)
B. A. 166—Business Communications (3)
B. A. 170—Industrial Management (3)
P. A. 170—Transportation I—Regulation of Transportation Services (3)
B. A. 171—Transportation II—Services, Rules, and Practices (3)
B. A. 172—Transportation III — Traffic Rates, Tariffs, Classifications and Interpretations

Industrial Administration students may so arrange their study programs as to take a series of related courses in one of the following fields:

1. Physics
2. Chemistry
3. Some basic engineering courses
4. Agriculture

4. Marketing Administration

Modern business administration is concerned largely with marketing activities. Buying and selling of products and services comprise the major portion of the time and energies of a large group of our population. The ideals of our system of private property, individual initiative and free enterprise are closely related to present-day marketing organization and practice. Effective solutions of the problems of marketing are necessary to the success of the individual business enterprise and for the welfare of the consumer. If the costs of distribution are to be reduced or kept from rising unduly, it is necessary that careful study of the organization, policies, methods, and practices of advertising, selling, purchasing, merchandising, transportation, financing, storing, and other related activities be made, and corresponding appropriate action taken by qualified marketing technicians and executives.

The purpose of the marketing administration program of study is to give the alert and serious student an opportunity to analyze, evaluate and otherwise study the problems connected with marketing institutions, organizations, policies, methods, and practices. The student who elects this field of concentration may develop his aptitudes, on the technical level, for research, selling, buying, and preparing advertising copy, and on the administrative level he may develop his abilities for organizing, planning, and directing the various activities in the field of marketing.

Thoughtful selection of courses from the following lists in addition to those required of all students in business administration will aid the student in preparing himself for an effective position in the field of marketing. He may form a concentration in:

a. General Marketing
b. Advertising
c. Foreign Trade and International Finance
d. Retail Store Management
e. Sales Management

B. A. 132, 133—Advanced Business Statistics (3, 3)
B. A. 151—Advertising Programs and Campaigns (2)
B. A. 144—Life, Group, and Social Insurance (2)
B. A. 152—Copy Writing and Layout (2)
B. A. 145—Property and Casualty Insurance (2)
B. A. 153—Purchasing Management (3)
B. A. 147—Business Cycle Theory (3)
B. A. 154—Retail Store Management (3)
B. A. 143—Credit Management (3)
B. A. 165—Office Management (3)
B. A. 166—Business Communications (3)
B. A. 156—Real Estate Principles and Practices (2)
B. A. 186—Real Estate Law and Conveyancing (2)
B. A. 146—Real Estate Financing and Appraisals (2)
P. A. 170—Transportation I—Regulation of Transportation Services (3)
B. A. 171—Transportation II—Services, Rules, and Practices (3)
B. A. 172—Transportation III — Traffic Rates, Tariffs, Classifications and Interpretations (3)
B. A. 250—Problems in Sales Management (3)
B. A. 251—Problems in Advertising (3)
B. A. 252—Problems in Retail Store Management (3)
B. A. 257—Seminar in Marketing Management (arranged)
B. A. 258—Research in Marketing (arranged)
B. A. 259—Studies of Special Problems in the field of Marketing Policies, Management and Administration (arranged)
B. A. 299—Thesis (3-6 hours) (arranged)

For those especially interested in foreign trade; selections may be made from the following courses:

P. A. 130—International Economic Policies and Relations (3)
P. A. 137—Economic Planning and Postwar Problems (3)
P. A. 141—International Finance and Exchange (3)
B. A. 151—Advertising Programs and Campaigns (2)
B. A. 157—Foreign Trade Procedure (3)
P. A. 170—Transportation I, Regulation of Transportation Services (3)
B. A. 173—Transportation IV, Overseas Shipping (3)
P. A. 180—Government and Business (3)
Ec. Geog. 4—Regional Geography of the Continents (3)
Geog. 100, 101—Regional Geography of the United States and Canada (3, 3)
Geog. 102—The Geography of Manufacturing in the United States and Canada (3)
Geog. 110—Middle America (3)
Geog. 111—South America (3)
Geog. 112—Recent Economic Trends in Latin America (3)
Geog. 120, 121—Economic Geography of Europe (3, 3)
Geog. 122—Economic Resources and Development of Africa (3)
Geog. 221—Seminar in Geography (arranged)
Geog. 222—Research Work (arranged)

5. Personnel Administration and Labor Economics

Recent development of large scale operation on the part of both private enterprise and government has emphasized the growing vital importance of personnel relationships. Successful operation depends on harmonious cooperation between employer and employee. The interests of the public, the owners, and the management, as well as those of the employees, may be greatly affected by the solutions evolved in any given case of personnel relationship. The growth of large-scale, centrally controlled labor organizations and the increased participation of governmental agencies in labor disputes have created problems for which business management, union officials, and government representatives have been, on the whole, ill-prepared to solve satisfactorily. The government, the unions, and business need men and women qualified to deal effectively with these problems. They should have broad training and technical information in the fields of business and public administration, economics, and psychology, together with suitable personalities. They must be able to approach these problems with an open mind, unbiased by personal and class prejudices.

Personnel administration which has to do with the direction of human effort, is concerned with securing, maintaining, and utilizing an effective working force. People adequately trained in personnel administration find employment in business enterprises, governmental departments, governmental corporations, education institutions and charitable institutions.

A student may select from the following courses those which will, in addition to those required of all students in business administration, best prepare him for the kind of personnel work he wishes to enter.

B. A. 162—Contemporary Trends in Labor Relations (3)
B. A. 163—Industrial Relations (3)
P. A. 161—Recent Labor Legislation and Court Decisions (3)
Econ. 130—Economics of Consumption (3)
B. A. 170—Industrial Management (3)
P. A. 111—Public Personnel Administration (3)
Psych. 4—Psychology for Students of Business and Public Administration (3)
Psych. 121—Social Psychology (3)
Psych. 160—Psychology of Personnel (3)
Psych. 161—Advanced Psychology of Personnel (3)
P. A. 211—Problems in Public Personnel Administration (arranged)
B. A. 262—Seminar in Contemporary Trends in Labor Relations (3)
B. A. 266—Research in Personnel Management (arranged)
B. A. 269—Studies of Special Problems in Employer-Employee Relationships (arranged)
B. A. 299—Thesis, 3-6 hours (arranged)

6. Transportation Administration

The problems of administration are complex and far reaching. The student preparing for this type of work should be well grounded in economics, government, and business administration, as well as being proficient in the use of the technical tools of the profession. Rail, highway, water, and air transportation are basic to our economic life, in fact, to our very existence. This curriculum gives considerable emphasis to air transportation.

The following courses, in addition to those required of all students in the Department of Business Organization and Administration, will aid the student in preparing himself for a useful place in the field of air, water, highway, and railway transportations. Airport management is a rapidly growing new business activity.

B. A. 170 Transportation I, Regulation of Transportation Services (3)

B. A. 171—Transportation II, Services, Rules, and Practices (3)

B. A. 172—Transportation III, Traffic Rates, Tariffs, Classifications and Interpretations (3)

B. A. 173—Transportation IV, Overseas Shipping (3)

B. A. 174—Commercial Air Transportation (3)

B. A. 175—Airline Administration (3)

B. A. 176—Problems in Airport Management (3)

Other courses may be selected with the approval of the advisor for the curriculum.

II. BUREAU OF BUSINESS AND ECONOMIC RESEARCH

The Bureau of Business Research is recognized as the laboratory for the practical study of business and economic problems. As such, it has three principal functions: first, to train students in the field of business and economic research; second, to disseminate information concerning business and economic conditions in Maryland; and third, to make available the facilities and to give active research assistance to interested business firms, governmental units, and citizen groups within the state.

Through the facilities of the Bureau qualified interested students can obtain practical experience in research work. This involves the application of techniques and principles studied in the classroom to actual business and governmental problems.

The Bureau—through its direct contact with business, government, labor and the professions and in its research into problems in these fields—serves as an important source of information relative to business and economic conditions and developments in the state. This information is made available, in part, by means of Bureau publications and, in part, by direct inquiry to the Bureau. This service is supplemented by active cooperation with individual business firms and citizen organizations within the state who request assistance in the study of specific problems which are recognized as having an important bearing on community welfare. The Bureau welcomes the opportunity to be of real service to such organizations.

III. DEPARTMENT OF ECONOMICS

The program of studies in the field of Economics is designed to meet the needs of students who wish to concentrate either on a major or minor scale in this division of the Social Sciences. Students who expect to enroll in the professional schools and those who are planning to enter the fields of Business or Public Administration, or Foreign Service, or Social Service Administration, will find courses in economics of considerable value to them in their later work. A student of economics should choose his courses to meet the requirements for his major objective, Master of Arts, or a Doctor of Philosophy degree. (He should consult the bulletin of the Graduate School for the general requirements for the advanced degrees.)

Requirements for an Economics Major

A student majoring in Economics is required to complete satisfactorily 120 semester hours of work in addition to the required work in military science, hygiene and physical activities. A general average of at least "C" is required for graduation. A student must maintain at least an average grade of "C" in his major and minor in order to continue in his chosen field.

The specific requirements for the Economics Major are:

I. Econ. 1, 2, 4, 5, 31 and 32—a total of 14 semester hours of specifically required courses in Economics. B. A. 20, 21 (Principles of Accounting) and B. A. 130 (Statistics) are recommended. Other courses in Economics to meet the requirements of a major are to be selected with the aid of a faculty advisor.

II. Social Science,—American Government (3); Sociology of American Life (3); American History 6;—a total of 12 semester hours.

III. English—12 semester hours, comprising Eng. 1, 2, and 3, 4; or 5, 6. Speech when it can be arranged in the student's program, 2 to 4 semester hours.

IV. Foreign Language and Literature, 12 semester hours in one language, unless an advanced course is taken. Candidates for the Ph.D. degree are required to have a reading knowledge of two modern foreign languages.

V. Natural Science and Mathematics, 12 semester hours.

VI. Military Science, Hygiene, and Physical Activities. The present University requirements is 16 semester hours in Military Science and Physical Activities for all able-bodied male students. Women students are required to take 8 semester hours credit in hygiene and physical activities.

A student who elects economics as a major must have earned 14 semester hours credit in the prerequisite courses in economics prior to his beginning the advanced work of the junior year. These are normally taken during the freshman and sophomore years and must be completed with an average grade of not less than "C". The major sequences are not completed until at least 26 and not more than 40 credits, in addition to the required prerequisite courses, are satisfactorily earned, that is, with an average grade of at least "C".

A minor in economics consists of the 14 prerequisite credits mentioned above plus at least 18 additional credits in economics.

As many as 24 additional semester hours may be taken by the economics students from Business and Public Administration courses.

The specific courses comprising the student's program of studies should be selected with the aid of a faculty advisor in terms of the student's objective and major interest.

Study Program for Economics Majors

	Semester	
Freshman Year	I	II
Econ. 1, 2—Economic Resources of the World	2	2
Econ. 4, 5—Economic Developments	2	2
Eng. 1, 2—Composition and Readings in American Literature	3	3
Mathematics 5, 6—General Mathematics	3	3
G. & P. 1—American Government (or Sociology of American Life)	3	....
Soc. 1—Sociology of American Life (or American Government)	....	3
Foreign Language	3	3
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
P. E. 42, 44—Hygiene (Women)	2	2
Physical Activities (Men and Women)	1	1
Total	19-20	19-20
Sophomore Year		
Econ. 31, 32—Principles of Economics	3	3
Eng. 3, 4, or 5, 6—Composition and Readings in World Literature	3	3
Foreign Language	3	3
Natural Science	3	3
Speech 18, 19—Introductory Speech	1	1
H. 5, 6—History of American Civilization	3	3
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities (Men and Women)	1	1
Total	17-20	17-20
Junior Year		
Econ. 140—Money and Banking	3	....
Econ. 150—Marketing Principles and Organization	3	..
B. A. 130—Elements of Business Statistics	....	3
Econ. 160—Labor Economics	3	....
Econ. 131—Comparative Economic Systems	....	3
Electives in Economics, Business and Public Administration*	6	9
Total	15	15
Senior Year		
Econ. 132—Advanced Economic Principles	3	....
Econ. 134—Contemporary Economic Thought	....	3
Econ. 171—Economics of American Industries	....	3
P. A. 140—Public Finance and Taxation	3	....
Electives in Economics, Business and Public Administration	9	9
Total	15	15

---

* Other electives may be selected with the approval of the student's adviser in Economics.

IV. OFFICE TECHNIQUES AND MANAGEMENT

1. Office Management

With the rapidly mounting volume of office work now being done, and the rapid increase in the number of office workers required to do it, effective office management and supervision is needed. Despite the current popular opinion that the office manager needs to know only a number of systems and machines, there is an ever-growing group of executives who believe that the management and supervision of an office is quite as important a job as the management of a factory or any other industrial enterprise. Many instances may be cited where the managers of offices have, by a consistent and logical use of scientific management principles, saved upwards of $100,000 a year for their companies.

Any young man or woman entering business today need have no hesitancy in preparing himself for the position of office manager, for that position has proved a stepping stone to offices of great responsibility for many of our present leading executives.

The student interested in this field will find the following required courses with the suggested electives selected under the guidance of the advisor, a valuable aid in preparing for positions in this field.

Office Administration Study Program

Freshman Year	*Semester* I	II
Econ. 1, 2—Economic Resources of the World	2	2
Eng. 1, 2—Composition and Readings in American Literature	3	3
B. A. 10, 11—Organization and Control	2	2
*Math 5—General Mathematics	3	....
Math. 6—Mathematics of Finance	....	3
G. & P. 1—American Government	3	....
Soc. 1—Sociology of American Life	....	3
S. T. 1—Principles of Typewriting	2	....
S. T. 2—Intermediate Typewriting	....	2
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
P. E. 42, 44—Hygiene (Women)	2	2
Physical Activities (Men and Women)	1	1
Total	18–19	18–19

Sophomore Year	I	II
Eng. 3, 4—Composition and Readings in World Literature	3	3
Econ. 31, 32—Principles of Economics	3	3
B. A. 20, 21—Principles of Accounting	4	4
Speech 18, 19—Introductory Speech	1	1
H. 5, 6—History of American Civilization	3	3
S. T. 10—Office Typewriting Problems	2	....
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities (Men and Women)	1	1
Total	17–19	15–17

---

* Students who have had two years of high school algebra will omit Math. 5 and take Math. 6 only, other students will take both Math. 5 and 6.

	Semester	
Junior Year	*I*	*II*
Psych. 1—Introduction to Psychology	3	....
Psych. 4—Psychology for Students of Commerce	....	3
Econ. 140—Money and Banking	3	....
Econ. 160—Labor Economics	....	3
Econ. 150—Principles of Marketing	3	....
B. A. 121—Cost Accounting	4	....
S. T. 112—Filing	2	....
B. A. 160—Personnel Management	....	3
B. A. 130—Elements of Business Statistics	....	3
S. T. 111—Office Machines	....	3
Total	15	15

Senior Year		
B. A. 180, 181—Business Law	4	4
B. A. 165—Office Management	3	....
B. A. 170—Industrial Management	3	....
B. A. 154—Retail Store Management	....	3
B. A. 151—Advertising Programs and Campaigns	....	2
Electives in Accounting; Marketing; Real Estate; Insurance; Finance; Transportation; and Psychology	6	7
Total	16	16

2. Secretarial Training

In order to meet the growing demand for college trained secretarial and office personnel, the College of Business and Public Administration is offering to both men and women a program of secretarial training courses. The Secretarial Curriculum provides students with the opportunity to obtain the essential background for stenographic, executive and administrative positions. One of the best methods of assuring success in one's chosen profession is through the medium of specialized secretarial service. To this end the courses have been designed. The major objectives of the College will be maintained and emphasized throughout the presentation of the program of studies. The purpose of this curriculum is not only to furnish merely technical or vocational training, but also, to aid the student in developing his natural aptitudes for secretarial and administrative positions. The development of the student's capacity to plan, organize, direct, and execute is the guiding principle followed in this curriculum. This program of study will appeal to the young man and woman who is ambitious, naturally capable, and willing to work. It will also appeal to those who realize that positions in secretarial service require much more than merely skill in typewriting and stenography. These are essential tools, but knowledge and skill in other subjects are of greater importance for the more responsible positions.

Placement Examination

Students with one or more years of college, high school, or equivalent training in shorthand and/or typewriting are required to take a placement examination in those subjects prior to, or at the time of, their first registration in a shorthand or typewriting course at the University.

Based on the results of this examination, the student may be exempt from certain of the beginning courses in either, or both, shorthand and typewriting. Credit will be given only for the work done in residence.

Record of Competency

Students must make a grade of "C" in each course in the Secretarial sequence before they may progress to the next advanced course.

Senior Requirement

A vocational level of competency in business skills is imperative at the time of graduation. As a requirement for graduation, students following the secretarial curriculum must either take S. T. 16 and S. T. 17 (or S. T. 18) within the six-month period preceding graduation, or take a proficiency examination on the material covered in these courses within this six-month period.

The following program of study is designed to give the capable student an opportunity to develop his potential aptitudes to an effective end.

	Semester	
Freshman Year	*I*	*II*
Eng. 1, 2—Composition and Readings in American Literature	3	3
G. & P. 1—American Government	3	....
Soc. 1—Sociology of American Life	....	3
Econ. 1, 2—Economic Resources of the World	2	2
Econ. 4, 5—Economic Developments	2	2
*Math. 5, 6—General Mathematics and Mathematics of Finance	3	3
S. T. 1—Principles of Typewriting	2	....
S. T. 2—Intermediate Typewriting	....	2
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
P. E. 42, 44—Hygiene (Women)	2	2
Physical Activities (Men and Women)	1	1
Total	18–19	18–19

Sophomore Year		
Eng. 3, 4—Composition and Readings in World Literature	3	3
H. 5, 6—History of American Civilization	3	3
Econ. 31, 32—Principles of Economics	3	3
S. T. 12, 13—Principles of Shorthand I, II	4	4
S. T. 10—Office Typewriting Problems	2	....
Speech 18, 19—Introductory Speech	1	1
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities (Men and Women)	1	1
Total	17–20	15–17

---

* Students who have had two years of high school algebra may omit Math. 5 and take only Math. 6.

Junior Year	Semester I	Semester II
B. A. 10, 11—Organization and Control	2	2
B. A. 20, 21—Principles of Accounting	4	4
S. T. 16—Advanced Shorthand	3	....
S. T. 17—Gregg Transcription	2	....
B. A. 166—Business Communications	....	3
S. T. 111—Office Machines	3	....
S. T. 112—Filing	....	2
Econ. 140—Money and Banking	....	3
Electives	2	2
Total	16	16

Senior Year	Semester I	Semester II
S. T. 110—Secretarial Work	3	....
S. T. 114—Secretarial Office Practice	....	3
B. A. 165—Office Management	3	....
B. A. 180, 181—Business Law	4	4
Econ. 160—Labor Economics	3	....
Suggested Elective—Gregg Shorthand Dictation (S. T. 18)	....	3
Electives	....	5
Econ. 150—Marketing Principles and Organization	3	....
Total	16	15

Two-Year Program in Secretarial Training

(For students who do not plan to spend the time in the University necessary for a degree.)

To meet the needs of men and women interested in a short, intensive, college course before seeking initial employment in offices, the College of Business and Public Administration offers a two-year program. This course is particularly adaptable to those who find themselves unable, at the time of enrollment, to follow the four-year program. Should a student, however, after entering the course find it possible to continue with his college training, he may, with the consent of his advisor and Dean, complete the requirements for a Bachelor of Science degree.

Requirement for Two-Year Certificate in Secretarial Training

A minimum of 60 semester hours of credit in courses suggested by the College in addition to the specified courses in military science, physical activities and hygiene are required for completion of the two-year program. The student is required to have a "C" average for all courses used in meeting the quantitative certificate requirements. A student who receives the mark of "D" in more than one-fourth of his credits must take additional courses or repeat courses until he has met these requirements.

A student who chooses to continue for a Bachelor of Science degree must fulfill all requirements of the College as set forth in the regular program.

Freshman Year	*Semester* I	*Semester* II
B. A. 10, 11—Organization and Control	2	2
S. T. 1—Principles of Typewriting	2	....
S. T. 2—Intermediate Typewriting	....	2
S. T. 12, 13—Principles of Shorthand I, II	4	4
S. T. 112—Filing	2	....
G. & P. 1—American Government	3	....
Soc. 1—Sociology of American Life	....	3
Eng. 1, 2—Composition and Readings in American Literature	3	3
P. E.—Hygiene	2	2
P. E.—Physical Activities	1	1
Total	19	17

Sophomore Year	I	II
S. T. 16—Advanced Shorthand	3	....
S. T. 17—Transcription	2	....
S. T. 10—Office Typewriting Problems	2	....
S. T. 18—Gregg Shorthand Dictation	....	3
S. T. 110—Secretarial Work	....	3
S. T. 111—Office Machines	....	3
Ec. 31, 32—Principles of Economics	3	3
H. 5, 6—History of American Civilization	3	3
Eng. 3, 4—Composition and Readings in World Literature	3	3
P. E.—Physical Activities	1	1
Total	17	19

Combined Secretarial Training and Business Teaching Curriculum

Capable students may elect courses offered by the College of Education in such a manner as to qualify themselves for commercial teaching in high schools and colleges.

Requirements to teach business subjects: Twenty semester hours of prescribed courses in education are required for certification to teach business subjects in Maryland, and 24 semester hours in the District of Columbia.

B. THE DIVISION OF WORLD ECONOMICS AND PUBLIC AFFAIRS

The Division of World Economics and Public Affairs comprises three Departments, viz., Government and Politics, Foreign Affairs and World Politics, and Geography. The Departments in this division furnish the student an opportunity to work out a major in Political Science, or to prepare himself for effective service in some division of our State or Federal Governments, or in the field of International Affairs. Courses leading to the Bachelor's, Master's, Doctor of Philosophy degrees are offered. The qualified student may so arrange his curriculum as to prepare himself for teaching, research, or for public service. Specific requirements in the departments of this division are:

English 1, 2 and 3, 4 or 5, 6	Total of 12 semester hours
Speech 1, 2—Public Speaking	Total of 4 semester hours
Foreign Language	Minimum of 12 semester hours
Science and Mathematics	Total of 12 semester hours
G. & P. 1—American Government	Total of 3 semester hours
Soc. 1—Sociology of American Life	Total of 3 semester hours
H. 5, 6—American History	Total of 6 semester hours
Economics 1, 2, 4, 5, 31, 32	Total of 14 semester hours

The required credit in Military Science, Physical Activities and Hygiene—16 hours for men and 8 hours for women.

The remaining courses are selected with the approval of the advisor for the department in terms of the student's major objective. A minimum of 120 semester hours credit, exclusive of Military Science, Physical Activities, and Hygiene, is required for graduation with an average grade of "C" or better and not more than 25 per cent in "D" grades can be counted toward fulfilling the requirement. Special curriculums for Public Administration and for Foreign Service are given below.

I. PUBLIC ADMINISTRATION

The world-wide trend on the part of governments, especially strong centralized governments toward the assumption of greater responsibility for guiding, controlling, and regulating the activities of the citizenry has created a strong demand and a real need for better trained governmental personnel. This trend toward increased governmental participation in the fields of our economic, political, and social life has been developing for a number of years but more rapidly in some countries than others. The growth was pronounced in the European countries during the twenties, it grew rapidly in the United States during the thirties. Thousands of men and women are now employed in developing organizations, evaluating policies, and devising methods and procedures for administering and supervising the manifold governmental activities required in the far-flung scheme of economic and social control. Our government, for example, has now become the largest "business" enterprise in the country. The gigantic task of organization, management and control was undertaken before an adequately qualified personnel could be selected and properly trained. Federal, State, and Local Governments have called upon the universities to aid in training young men and women for effective public service. Graduates who are mentally alert, can think clearly, form critical judgments, express their thoughts and conclusions succinctly, have a well-balanced mind, and who possess a professional point of view with reference to their work, are needed in a number of government divisions.

The curriculum in Public Administration is designed primarily to aid in the preparation of young men and women for technical, supervisory, and managerial positions in the various state and federal services. The particular selections of subjects in any individual case will depend on the specific position for which the student wishes to prepare. The full course resources of the University are available for this training. Courses, for example, in foreign languages, geography, history, philosophy, and government, as well as studies in social, legal, political, and economic institutions may be advisable in addition to the required courses in Business and Public Administration.

Properly qualified graduates can usually find employment in the field of their major interest. Large numbers of people trained in such technical fields as statistics, accounting, finance, personnel, marketing and transportation are employed by governmental agencies. There is a need for people trained for and interested in the various aspects of research in the social science and business administration fields. Graduates fitted by nature and equipped through proper training and experience for the broader fields of administration and management can find interesting work in governmental units and at the same time satisfy their normal desire to render a special service to society.

Some of the governmental agencies which employ college trained people are given as an illustration of the opportunities available. Many of these are within the "Civil Service" System, such federal agencies as the Social Security Board; Central Statistical Board, Federal Trade Commissions; National Resources Committee; Federal Housing Administration; Federal Reserve Board; Reconstruction Finance Corporation; Tennessee Valley Corporation; Bureau of Agricultural Economics; Bureau of Labor Statistics; Bureau of the Census; Bureau of Foreign and Domestic Commerce; and the Division of Research and Statistics in the Treasury Department demand the services of many professionally and technically trained people. The Departments of Agriculture, Commerce, State, Labor, and Treasury use many college trained men and women.

The undergraduate student who expects to make his concentration in the field of Public Administration will find the following curriculum serviceable:

	Semester	
Freshman Year	*I*	*II*
Eng. 1, 2—Composition and Readings in American Literature	3	3
G. & P. 1—American Government	3	....
Soc. 1—Sociology of American Life	....	3
Foreign Language	3	3
Econ. 1, 2—Economic Resources of the World	2	2
Econ. 4, 5—Economic Developments	2	2
Mathematics 5, 6	3	3
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
P. E. 42, 44—Hygiene (Women)	2	2
Physical Activities (Men and Women)	1	1
Total	19–20	19–20

Sophomore Year	*Semester* *I*	*II*
Eng. 3, 4, or 5, 6—Composition and Readings in World Literature	3	3
Econ. 31, 32—Principles of Economics	3	3
H. 5, 6—History of American Civilization (American History)	3	3
Foreign Language	3	3
G. & P. 4—State and Local Government	3	....
G. & P.—Selection from G. & P. 7, 8, 9, 10, 51 and 54	....	3
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities (Men and Women)	1	1
Total	16–19	16–19

Junior Year		
P. A. 110—Principles of Public Administration	3	....
P. A. 111—Public Personnel Administration	....	3
Econ. 160—Labor Economics	3	....
Econ. 140—Money and Banking	3	....
B. A. 140—Financial Management	....	3
Econ. 130—Elements of Business Statistics	3	....
Econ. 150—Marketing Principles	3	....
B. A. 132—Advanced Business Statistics	....	3
Speech 18, 19—Introductory Speech	1	1
Electives	....	6
Total	16	16

Senior Year		
P. A. 180—Government and Business	3	....
P. A. 126—The Government and Social Security	....	3
P. A. 141—International Finance and Exchange	....	3
P. A. 140—Public Finance and Taxation	3	....
Econ. 132—Advanced Economic Principles	3	....
Econ. 134—Contemporary Economic Thought	....	3
Econ. 131—Comparative Economic Systems	....	3
Electives (to be selected in terms of the student's primary objective with the aid of his advisor)	6	3
Total	15	15

Selection of electives may be made from the following courses:

P. A. 124—Governmental Accounting (3)

P. A. 161—Recent Labor Legislative and Court Decisions (3)

P. A. 170—Transportation I, Regulation of Transportation Services (3)

P. A. 114—Public Budgeting (3)

H. 135—Constitutional History of the United States (3, 3)

P. A. 201—Seminar in International Organization (3)

P. A. 213—Problems of Public Administration (3)

P. A. 214—Problems of Public Personnel Administration (3)

P. A. 235—Seminar in International Economic Relations (3) (arranged)

P. A. 240—Research in Governmental Fiscal Policies and Practices (arranged)

P. A. 280—Seminar in Business and Government Relationships (arranged)

P. A. 284—Seminar in Public Utilities (arranged)

P. A. 299—Thesis (3-6 hours) (arranged)

G. & P. 2—American National Government (3)

G. & P. 7, 8, 9, 10—Comparative Government (2, 2, 2, 2)

G. & P. 51—International Relations (3)

G. & P. 64—Municipal Government and Administration (3)

G. & P. 102—International Law (3)

G. & P. 105—Recent Far Eastern Politics (3)

G. & P. 131—Constitutional Law (3)

G. & P. 201—Seminar in International Law (3)

II. FOREIGN SERVICE AND WORLD POLITICS

If the student expects to enter the foreign service he should be well grounded in the language, geography, history, and politics of the region of his anticipated location as well as in the general principles and practices of organization and administration. It should be recognized that only a limited training can be secured during the undergraduate period. When more specialized or more extensive preparation is required, graduate work should be planned. The individual program, in either instance, however, should be worked out under the guidance of a faculty advisor. The following study program is offered as a guide in the selection of subjects.

Study Program for Foreign Service and International Relations

	Semester	
Freshman Year	*I*	*II*
Eng. 1, 2—Composition and Readings in American Literature	3	3
G. & P. 1—American Government	3	....
Soc. 1—Sociology of American Life	....	3
Foreign Language (Selection)	3	3
Econ. 1, 2—Economic Resources of the World	2	2
Econ. 4, 5—Economic Developments	2	2
Mathematics 5, 6	3	3
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
P. E. 42, 44—Hygiene (Women)	2	2
Physical Activities (Men and Women)	1	1
Total	19-20	19-20

Sophomore Year	*Semester* I	*Semester* II
Eng. 3, 4 or 5, 6—Composition and Readings in World Literature	3	3
Foreign Language (Continuation of Freshman year selection)	3	3
Econ. 31, 32—Principles of Economics	3	3
H. 5, 6—History of American Civilization	3	3
G. & P.—Comparative Government selection in accordance with the student's need	2	2
Sp. 18, 19—Introductory Speech	1	1
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities (Men and Women)	1	1
Total	16–19	16–19

Junior Year	I	II
Econ. 150—Marketing Principles and Organization	3	....
Econ. 140—Money and Banking	3	....
Econ. 160—Labor Economics	....	3
B. A. 130—Elements of Business Statistics	3	....
Econ. 131—Comparative Economic Systems	....	3
Ec. Geog.—Selection of Regional division to fit student's needs	3	3
Electives to meet student's major interest	3	6.
Total	15	15

Senior Year	I	II
G. & P. 102—International Law	3	....
G. & P. 131—Constitutional Law	....	3
G. & P. 180—Government and Business	....	3
Ec. 132—Advanced Economic Prin., or Ec. 134, Contemporary Econ. Thought	3	....
P. A. 181—Administrative Law	3	....
P. A. 130—International Economic Policies and Relations	....	3
P. A. 141—International Finance and Exchange	....	3
Electives to meet the needs of the student's major interest	3	6
Total	15	15

Suggested that electives be selected from the following:

American History 108, 127, 129, 133, 135, 145, and 146.

European History 175, 176, 179, 180, 185, 186, and History 191—History of Russia; History 195—The Far East.

Government and Politics 7, 8, 9, 10, 100, 105, and 154.

III. GEOGRAPHY

Agriculture, industry, trade, social customs and politics of a given geographical region are influenced to a great extent by the natural resources of that area. Climatic conditions, topography, mineral deposits, water power, soils and other physical factors largely determine the economic possibilities of a country. The characteristics of the philosophy, political ideals and degrees of technological maturity of the people within a given geographical unit, in turn, determine in large measure the degree of effectiveness with which the natural resources are utilized. The standard of living, the purchasing power, and the political outlook of the inhabitants of a country are, in the main, the result or the expression of the interrelationship existing between the people and their physical environment.

This curriculum is designed to aid the student in securing the facts concerning the major geographical areas of the world and in studying and analyzing causes and results as they affect economic, political, and social activities. The student interested in international trade, international political relations, diplomacy, overseas governments and national aspirations will find the courses in this department of great practical value. Work is offered on both the undergraduate and the graduate levels. Considerable emphasis is placed on research activity on the part of faculty members and graduate students.

The student interested in this field of human endeavor should select his courses from those listed below with the aid of a faculty member who is conversant with his objective and the requirements for success in this field. The selection of such essential courses as foreign language, history, geography, government, and social customs should be made in terms of the geographical area in which the student expects to operate.

Geog. 4—Regional Geography of the Continents (2)
Geog. 30—Principles of Physical Geography (3)
Geog. 41—Weather and Climate (3)
Geog. 50, 51—Map Interpretation and Field Work (1, 1)
Geog. 60, 61—Economic Geography (2, 2)
Geog. 100, 101—Regional Geography of the United States and Canada (3, 3)
Geog. 102—The Geography of Manufacturing in the United States and Canada (3)
Geog. 110—Middle America (2)
Geog. 111—South America (2)
Geog. 112, 113—Recent Trends in Latin America (2, 2)
Geog. 115—The Peoples of Latin America (3)
Geog. 120, 121—Economic Geography of Europe (3, 3)
Geog. 122—Economic Resources and Development of Africa (3)
Geog. 123—Problems of Colonial Geography (3)
Geog. 130—The Natural Resources of the Chinese Republic, Korea, and Japan (2)
Geog. 131—The Human Resources and Industrial Development of the Chinese Republic, Korea, and Japan (2)
Geog. 132—The Natural Resources of India and the East Indies (2)
Geog. 133—The Human Resources and Industrial Development of India and the East Indies (2)
Geog. 135—The Human Geography of the Chinese Republic (3)
Geog. 140, 141—The Natural Resources of the Union of Socialist Soviet Republics (3, 3)
Geog. 203—Geomorphology (3)
Geog. 206—Micro-Climatology (3)
Geog. 207—Advanced General Climatology (3)
Geog. 220, 221—Seminar in Geography (arranged)
Geog. 222, 223—Research Work (arranged)
A. E. 212, 213—Land Utilization and Agricultural Production (3, 3)
A. E. 214—Consumption of Farm Products in the United States (3)
Soc. 121, 122—Population Problems and Policies in North America and Eurasia (3, 3)

COLLEGE OF EDUCATION

Henry Brechbill, *Acting Dean*
Alma Frothingham, *Secretary*

The College of Education meets the needs of the following classes of students: (1) undergraduates preparing to teach in high schools, preparatory schools, and vocational schools; (2) present or prospective elementary teachers who wish to supplement their training; (3) students preparing for educational work in the trades and industries; (4) students preparing to become home demonstrators, club or community recreation leaders, and (in cooperation with the Department of Sociology) social workers; (5) graduate students preparing for teaching, supervisory, or administrative positions; (6) students whose major interests are in other fields, but who desire courses in education.

Special Facilities

Because of the location of the University in the suburbs of the nation's capital, unusual facilities for the study of education are available to its students and faculty. The Library of Congress, the library of the Office of Education, and special libraries of other government agencies are accessible, as well as the information services of the National Education Association, American Council on Education, U. S. Office of Education, and other institutions, public and private. The school systems of the District of Columbia and suburban counties of Maryland offer generous cooperation.

Requirements for Admission

The requirements for admission to the College of Education are in general the same as for the other colleges of the University. Candidates for admission whose high school records are consistently low are strongly advised not to seek admission to the College of Education.

Guidance in Registration

At the time of matriculation each student is tentatively assigned to a member of the faculty who acts as the student's personal adviser. The choice of subject areas within which the student will prepare to teach and the selection of his professional courses will be made under faculty guidance during the first year in the Introduction to Education course, required of all freshmen. While in particularly fortunate cases it may be possible to make satisfactory adjustments as late as the junior year, for students from other colleges who have not already entered upon the sequence of professional courses, it is highly desirable that this work in the College of Education be begun in the freshman year. Students who intend to teach (except Vocational Agriculture) should register in the College of Education, in order that they may have continuously the counsel and guidance of the faculty which is directly responsible for their professional preparation.

Junior Status

The first two years of college work are preparatory to the professional work of the junior and senior years. To be eligible to enter the professional courses, a student must have attained junior status, that is, he must have completed 64 semester hours with an average grade of C or better.

Education Courses in Baltimore

The majority of the professional courses and some of the arts and sciences courses required for undergraduate preparation in Education are offered in Baltimore in late afternoon and evening courses primarily for employed people. On a part time basis, a student may complete some or all of his work for a Bachelor of Arts or Bachelor of Science degree in Education in the Baltimore Division of the College of Education. Graduate courses in Baltimore are also available for students working on masters' and doctors' degrees in education.

A separate announcement of these courses is issued in the summer of each year. This announcement may be obtained from the Baltimore Division, College of Education, University of Maryland, Lombard and Greene Streets, Baltimore 1, Maryland.

Certification of Secondary School Teachers

The State Department of Education certifies to teach in the approved high schools of the State only graduates of approved colleges who have satisfactorily fulfilled subject-matter and professional requirements. Specifically it limits certification to graduates who "rank academically in the upper four-fifths of the class and who make a grade of C or better in practice teaching."

From the offerings in Education, the District of Columbia requirement of 24 semester hours of professional courses may be fully met.

Degrees

The degrees conferred upon students who have met the conditions prescribed for a degree in the College of Education are Bachelor of Arts and Bachelor of Science.

Professional Organizations

The College of Education sponsors two professional organizations, Phi Delta Kappa, the national professional fraternity for men in Education, and Iota Ladbda Sigma, the national honorary fraternity in Industrial Education. Both fraternities have large and active chapters and are proving outstanding professional leadership in their fields of service.

CURRICULA AND REQUIRED COURSES

There are nine curricula in the College of Education, as follows: (1) *Academic*, which is selected by students who wish to become teachers of English, social studies, sciences, mathematics, or languages; (2) *Art Education;* (3) *Business Education;* (4) *Dental Education;* (5) *Elementary Education;* (6) *Home Economics Education;* (7) *Nursery School Education;* (8) *Industrial Education;* and (9) *Physical Education.*

A total of 120 semester hours in addition to the University requirement in military and physical education is required for graduation in the College of Education. In no case shall the total number of semester hours required for graduation be less than 128.

The following minimum requirements are common to all curricula: English—12 semester hours; social studies—12 semester hours, as follows: Soc. 1—Sociology of American Life; G. & P. 1—American Government; and H. 5, 6—History of American Civilization; science or mathematics—6 semester hours; education—20 semester hours; Speech 1, 2—Public Speaking—4 semester hours; physical education and military science as required by the University.

Marks in all required courses in education and in the major and minor must be C or higher. A general average of C or higher must be maintained and three-fourths or more of the total required credits must carry grades of C or better. In order to be admitted to a course in student teaching (Ed. 143, 148, or 149) a student must have a grade point average of 2.275.

Exceptions to curricular requirements and rules of the College of Education must have the approval of the student's adviser and the dean.

ACADEMIC EDUCATION — GENERAL AND SPECIFIC REQUIREMENTS

Students enrolled in this curriculum will meet the following *general* requirements, which are normally fulfilled by the end of the sophomore year:

(1) English, 12 semester hours.

(2) Foreign language for candidates for the bachelor of arts degree: 12 semester hours provided the student enters with less than three years of foreign language credits; 6 semester hours, if he enters with three years of such credits. No foreign language is required of any student who enters with four years of language credits nor of candidates for the bachelor of science degree.

(3) Social sciences, 12 semester hours as follows: Soc. 1—Sociology of American Life; G. & P. 1—American Government; and H. 5, 6—History of American Civilization.

(4) Science or mathematics, 12 semester hours.

(5) Education, 20 semester hours.

All students who elect the academic education curriculum will fulfill the preceding *general* requirements and also prepare to teach at least two high school subjects which will involve meeting *specific* requirements in *particular* subject matter fields called majors or minors. Usually the student completes one major and one minor. The requirements for each major and minor are detailed as follows:

The *specific* requirements by subject fields are as follows:

English. A major in English requires 36 semester hours as follows:

Survey and Composition	12 semester hours
Courses in American Literature	6 semester hours
Electives	18 semester hours

A minor in English requires 26 semester hours. It includes the 18 semester hours prescribed for the major and 8 hours of electives.

Electives must be chosen with the approval of the adviser who will guide the student in terms of College of Education records and recommendations of the English Department.

Social Sciences. For a major in this group 36 semester hours are required, of which at least 18 hours must be in history, including 6 hours in American history and 6 hours in European history. Six of the 18 hours must be in advanced courses. For a minor in the group, 24 hours are required, of which 18 are the same as specified above, and 6 of which must be in advanced courses.

History (including one year each of American and European History)	18 semester hours
Economics or sociology	6 semester hours
Electives	12 semester hours

For a minor, the requirements are the same less the electives.

Foreign Languages. All students preparing to teach French, German, or Spanish are required to take Comparative Literature 101 and 102 and are strongly advised to take the review course for majors (Fr., Ger., or Sp. 99). Further courses in comparative literature along with work in European or Latin American history are also recommended.

Specific minimum requirements in the three languages are a semester each of intermediate and advanced conversation (Fr., Ger., or Sp. 8 and 80), a semester of grammar review, six hours of introductory survey of the literature (Fr., Ger., Sp. 75 and 76) and six hours in literature courses numbered 100 or above.

Classical Languages. Both a major and minor are offered in Latin consisting of 30 and 20 semester hours respectively. The courses are chosen with the advice of the Department of Foreign Languages and Literatures.

Mathematics. A major in mathematics requires 36 semester hours as follows: Math. 7, 14, 15, 17, 20, 21, 100, 128, 140, 141, and six elective credits in mathematics.

For a minor, the requirements are: Math. 7, 14, 15, 17, 20, 21, and four elective credits in mathematics.

The following courses are recommended for electives in mathematics: Math. 13, 16, 18, 19, 101, 102, 129.

Students who pass an attainment examination with a satisfactory grade are excused from the requirement in Solid Geometry.

Science. In general science a major of 40 semester hours and a minor of 30 semester hours are offered, each including elementary courses in chemistry, physics, and biology (zoology and botany). The major should include one of the following programs.

Program I, emphasizing chemistry: Math. 14, 15; Chem. 1, 3, 5, 19, 31, 32, 33, 34, 101, 181, 182, 183, 184; Phys. 10, 11, or 20, 21; Zool. 1; Bot. 1; Bact. 1.

Program II, emphasizing physics: Math. 14, 15; Chem. 1, 3; Phys. 20, 21, and six additional hours in physics; Zool. 1; Bot. 1; Bact. 1.

Program III, emphasizing botany: Chem. 1, 3; Phys. 1, 2, or 10, 11; Zool. 1; Bot. 1, 2, 50, 111, 102; Bact. 1.

Program IV, emphasizing zoology: Chem. 1, 3; Phys. 1, 2 or 10, 11; Zool. 2, 3, 14, 15, 107, 121 or 104, 75, 76; Bot. 1; Bact. 1.

Minors of 20 semester hours are offered in chemistry, in physics, and in biological sciences. A minor in biology must be supported by a course in chemistry. A minor in physics must be supported by a basic course in chemistry. A minor in chemistry must be supported by a basic course in physics.

If a major in general science is accompanied by a minor in chemistry, physics, or biology, the same credits may be applied to both provided that they number not less than 52 semester hours in natural sciences.

Academic Education Curriculum

Freshman Year

	Semester I		Semester II
Ed. 2—Introduction to Education	2	or	2
Eng. 1, 2—Composition and American Literature	3		3
Soc. 1—Sociology of American Life	3		...
Speech 1, 2—Public Speaking	2		2
G. & P. 1—American Government	....		3
M. I. 1, 2—Basic R. O. T. C. (Men)	3		3
Physical Activities	1		1
P. E. 42, 44—Hygiene I, II (Women)	2		2
General requirements	....		....
Major and minor requirements	....		....
Electives	....		....
Total	17		17-18

Sophomore Year

	Semester I		Semester II
Ed. 2—Educational Forum	1	or	1
Eng. 3, 4—Composition and World Literature	3		3
H. 5, 6—History of American Civilization	3		3
M. I. 3, 4—Basic R. O. T. C. (Men)	3		3
Physical Activities	1		1
General requirements	....		....
Major and minor requirements	....		....
Electives	....		....
Total	17–18		17–18

Junior Year

	Semester I	Semester II
Psych. 80 Educational Psychology	3	....
Ed. 160—Educational Sociology	2	....
Ed. 130—Theory of the Junior High School or	....	2
Ed. 131—Theory of the Senior High School	....	2
Ed. 140—Curriculum, Instruction, and Observation	....	3
General requirements	....	....
Major and minor requirements	....	....
Electives	....	....
Total	16–18	16–18

Senior Year

	Semester I	Semester II
Ed. 150—Educational Measurements	2	....
Ed. 148—Methods and Practice of Teaching or	4	or 4
Ed. 149—Methods and Practice of Teaching	9	or 9
Major and minor requirements	....	....
Total	12–18	12–18

ART EDUCATION

This curriculum is planned to meet the growing demand for special teachers and supervisors in art activity. Emphasis is placed upon ways to draw out and develop the creative inclinations of beginners; to integrate art and other areas of study; to utilize art in solving social problems. General requirements are the same as for the academic curriculum.

Art Education Curriculum

Freshman Year

	Semester I	Semester II
Ed. 2—Introduction to Education	2	....
Eng. 1, 2—Composition and American Literature	3	3
Soc. 1—Sociology of American Life	....	3
G. & P. 1—American Government	3	....
Speech 1, 2—Public Speaking	2	2
Pr. Art 1—Design	....	3
Pr. Art 2—Survey of Art History	2	....
P. E. 42, 44—Hygiene (Women)	2	2
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
*Math. 0—Basic Mathematics, or	....	0
Electives	2	2–4
Total	17	16–18

---

* An examination in mathematics will be given to freshmen during the fall semester; those who pass will not be required to take Math. 0

	Semester	
Sophomore Year	*I*	*II*
Ed. 3—Educational Forum	....	1
Eng. 3, 4—Composition and World Literature	3	3
Chem. 11, 13—General Chemistry	3	3
Pr. Art 20—Costume Design	3	....
Pr. Art 30—Topography and Lettering	....	3
Cr. 2—Simple Crafts	....	2
Pr. Art 3—Creative Art Inspired by Primitive Art	2	....
Pr. Art 4—Three-dimensional Design	....	2
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Electives	4–6	2
Total	16–18	16–18

Junior Year

	I	II
Ed. 160—Educational Sociology	2	....
Psych. 80—Educational Psychology	....	3
Ed. 130—Theory of the Junior High School, or	....	2
Ed. 131—Theory of the Senior High School	....	2
H. 5, 6—American History	3	3
Pr. Art. 140, 141—Interior Design	3	3
Cr. 20—Ceramics	2	....
Cr. 30—Metalry	2	....
Cr. 5—Puppetry	....	2
Professional Lectures	....	0
Electives	4–6	3–5
Total	16–18	16–18

Senior Year

	I	II
Ed. 140—Curriculum, Instruction, and Observation—Art	3	....
Ed. 150—Educational Measurement	2	....
Ed. 148—Methods and Practice of Teaching	....	4–9
Pr. Art 132—Advertising Layout	2	....
Cr. 40—Weaving	2	....
Cr. 198—Crafts in Therapy	....	2
Electives	7	5–10
Total	16	16

BUSINESS EDUCATION

Two curricula are offered for the preparation of teachers of business subjects. The General Business Education Curriculum qualifies for teaching all business subjects except shorthand. Providing thorough training in general business, including economics, it leads to teaching positions on both junior and senior high school levels. By the proper selection of electives, persons following this curriculum may also qualify as teachers of social studies.

The Secretarial Education course is adapted to the needs of those who wish to become teachers of shorthand as well as other business subjects.

General Business Education Curriculum

Freshman Year

	Semester	
	I	II
Eng. 1, 2—Composition and American Literature	3	3
G. & P. 1—American Government	3	....
Soc. 1—Sociology of American Life	....	3
Math. 5—General Mathematics	3	....
Math. 6—Mathematics of Finance	....	3
Econ. 1, 2—Economic Resources	2	2
S. T. 1—Principles of Typewriting	....	2
Ed. 2—Introduction to Education	3	....
Speech 1, 2—Public Speaking	2	2
M. I. 1, 2—Basic R. O. T. C. (Men)	3	3
P. E. 42, 44—Hygiene I, II (Women)	2	2
Physical Activities (Men and Women)	1	1
Total	19–20	18–19

Sophomore Year

Eng. 3, 4—Composition and World Literature	3	3
Hist. 5, 6—History of American Civilization	3	3
Econ. 31, 32—Principles of Economics	3	3
B. A. 20, 21—Principles of Accounting	4	4
S. T. 2—Intermediate Typewriting	2	....
S. T. 10—Office Typewriting Problems	....	2
Ed. 3—Educational Forum	....	1
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities (Men and Women)	1	1
Total	16–19	17–20

Junior Year

Psych. 80—Educational Psychology	3	....
Ed. 140—Curriculum, Instruction, and Observation—Business Subjects	....	3
Ed. 146—Techniques of Teaching Office Skills	2	....
Ed. 160—Educational Sociology	....	2
Ed. 130—Theory of Junior High School, or Theory of Senior High School	2	....
S. T. 112—Filing	....	2
S. T 111—Office Machines	3	....
B. A. 10, 11—Organization and Control	2	2
Econ. 140—Money and Banking	3	....
Econ. 150—Marketing and Organization	....	3
Electives	2	5
Total	17	17

Senior Year

Ed. 150—Educational Measurements	2	....
Ed. 149—Methods and Practice of Teaching	....	9
B. A. 165—Office Management	3	....
B. A. 180, 181—Business Law	4	4
Electives	8	3
Total	17	16

Secretarial Education Curriculum

Freshman Year

Same as General Business Curriculum

Sophomore Year	Semester I	Semester II
Ed. 3—Educational Forum	....	1
Eng. 3, 4—Composition and World Literature	3	3
Hist. 5, 6—History of American Civilization	3	3
S. T. 12, 13—Principles of Shorthand I, II	4	4
S. T. 2—Intermediate Typewriting	2	....
S. T. 10—Office Typewriting Problems	....	2
Econ. 37—Fundamentals of Economics	3	....
M. I. 3, 4—Basic R. O. T. C. (Men)	3	3
Physical Activities	1	1
Total	19	17

Junior Year	I	II
Psych. 80—Educational Psychology	....	3
Ed. 140—Curriculum, Instruction, and Observation—Business Subjects	....	3
Ed. 146—Techniques of Teaching Office Skills	2	....
Ed. 160—Educational Sociology	2	....
Ed. 130—Theory of Junior High School, or Theory of Senior High School	....	2
S. T. 16—Advanced Shorthand	3	....
S. T. 17—Transcription	2	....
B. A. 20, 21—Principles of Accounting	4	4
S. T. 112—Filing	....	2
S. T. 111—Office Machines	3	....
Electives	....	3
Total	16	17

Senior Year	I	II
Ed. 150—Educational Measurement	2	....
Ed. 149—Methods and Practice of Teaching	....	9
S. T. 110—Secretarial Work	3	....
B. A. 165—Office Management	....	3
B. A. 180, 181—Business Law	4	4
Electives	8	....
Total	17	16

Dental Education

In cooperation with the School of Dentistry, the College of Education offers a curriculum in dental education leading to the Bachelor of Science degree, with course work offered in the Baltimore Division only. This curriculum is designed to prepare superior graduates of the Dental School for positions as teachers of dentistry. Details of the program may be obtained from the Dean of the School of Dentistry or of the College of Education. Persons entering the program must be approved by the Committee on Admissions of the Dental School.

For students who are dental school graduates with the degree of Doctor of Dental Surgery (acquired since 1936-37, after six years of study) and who have the approval of the Committee on Admissions of the Dental School:

A. Ninety-eight (98) semester hours (or the equivalent of three years of work) may be credited for the dental school work provided none of the dental school marks were lower than "B".

B. The additional 32 semester hours, as follows, are required:

1. *English.* English language and literature		8
2. *Social Science.* Four (4) of which are in American History and the other 4 directed electives		8
3. Education, as follows:		16
History of Dental Education	2	
Educational Psychology	4	
Secondary Education	2	
Educational Tests and Measurements	2	
Methods of Teaching Vocational Subjects	2	
Organization and Management of Vocational Classes	2	
Directed electives	2	

ELEMENTARY EDUCATION

This curriculum is open only to persons who have completed two or three year curricula in a Maryland State Teachers College or other accredited teacher education institutions whose records give evidence of ability and character essential to elementary teaching. Such persons will be admitted to advanced standing and classified provisionally in appropriate classes.

Credit for extension courses given by other institutions may be accepted in an amount not exceeding 30 semester hours. The last 30 semester hours of work preceding the conferring of the degree must be done in the University of Maryland.

Additional curriculum requirements for students who are admitted with approximately 64 semester hours of advanced standing (two year normal school graduates) are as follows:

Education—4 semester hours; English—10 semester hours; science (chemistry, physics, zoology, botany, bacteriology, entomology)—10 semester hours; social science (history, sociology, economics, government and politics, geography)—12 semester hours. Electives to be chosen according to individual need and approved by adviser.

Additional curriculum requirements for students who enter with approximately 96 semester hours of advanced standing (three-year normal school graduates) are as follows:

Education—2 semester hours; English—6 semester hours; science (as above)—6 semester hours; social science (as above)—12 semester hours. Electives—as above.

State Department of Education requirements provide that a teacher in service may present for certificate credit not more than six semester hours of credit completed during a school year. The College of Education assumes no responsibility in this connection but candidates are advised to observe this regulation.

HOME ECONOMICS EDUCATION

The Home Economics Education curriculum is designed for students who are preparing to teach vocational or general home economics or to engage in any phase of home economics work which requires a knowledge of teaching methods. It includes studies of all phases of home economics and the allied sciences, with professional training for teaching these subjects. A student majoring in this curriculum may also qualify for a science minor. Electives may be chosen from other colleges.

Students electing this curriculum may register in the College of Education or the College of Home Economics.

Home Economics Education Curriculum

Freshman Year	*Semester* I	*Semester* II
Ed. 2—Introduction to Education	2	....
Eng. 1, 2—Composition and American Literature	3	3
Soc. 1—Sociology of American Life	3	....
G. & P. 1—American Government	....	3
Speech 1, 2—Public Speaking	2	2
H. E. 1—Home Economics Lectures	1	....
Pr. Art 1—Design	3	....
*Math. 10—Algebra, or Elective	....	3
P. E. 42, 44—Hygiene I, II	2	2
Physical Activities	1	1
Tex. 1—Textiles	....	3
Total	17	17

Sophomore Year	I	II
Ed. 3—Educational Forum	....	1
Eng. 3, 4—Composition and World Literature	3	3
H. 5, 6—History of American Civilization	3	3
Chem. 11, 13—General Chemistry	3	3
Pr. Art 20—Costume Design	3	....
Clo. 20A or B—Clothing	....	3
Foods 2, 3,—Foods	3	3
Physical Activities	1	1
Total	16	17

---

* Not required of students who pass the qualifying examination which is given during the first semester. Prerequisite for chemistry.

Junior Year	*Semester* I	II
H. E. Ed. 101—Curriculum, Instruction, and Observation	....	3
Psych. 80—Educational Psychology	3	....
Home Mgt. 150, 151—Home Management	3	3
Nut. 10—Elements of Nutrition	....	3
Foods 100—Food Economics	2	....
Foods 101—Meal Service	....	2
Clo. 120—Draping	....	3
Pr. Art 140—Interior Design	3	....
Econ. 37—Fundamentals of Economics	3	....
Zool. 16—Human Physiology	4	....
Bot. 1—General Botany	....	4
Total	18	18

Senior Year		
H. E. Ed. 102—Problems in Teaching Home Economics	3	....
H. E. Ed. 103—Teaching Secondary Vocational Home Economics	....	4–8
Home Mgt. 152—Practice in Management of the Home	....	3
H. E. Ed. 110—Child Development	3	....
Ed. 150—Educational Measurement	2	....
Bact. 51—Household Bacteriology	3	....
Ed. 130—Theory of the Junior High School or	2	....
Ed. 131—Theory of the Senior High School	....	....
Ed. 160—Educational Sociology	2	....
Electives	....	3
Total	15	10

NURSERY SCHOOL EDUCATION

The nursery school education curriculum has as its goal the preparation of nursery school teachers. It is also planned to further the personal development of the student and to give training in homemaking.

Nursery School Education Curriculum

Freshman Year	*Semester* I	II
Ed. 2—Introduction to Education	2	....
Eng. 1, 2—Composition and American Literature	3	3
Soc. 1—Sociology of American Life	3	....
G. & P. 1—American Government	....	3
Speech 1, 2—Public Speaking	2	2
Pr. Art 1—Design	3	....
Psych. 1—Introduction to Psychology	....	3
P. E. 42, 44—Hygiene I, II	2	2
Physical Activities	1	1
Electives	2	3
Total	17	16

	Semester	
Sophomore Year	I	II
Ed. 3—Educational Forum	....	1
Eng. 3, 4—Compostion and World Literature	3	3
P. E. 56, 58—The Dance	2	2
Foods 1—Introductory Foods	....	3
Zool. 16—Human Physiology	4	....
Zool. 55—Development of the Human Body	....	2
H. 5, 6—History of American Civilization	3	3
Nut. 10—Elements of Nutrition	3	....
Physical Activities	1	1
Electives	....	2
Total	16	17
Junior Year		
Psych. 80—Educational Psychology	3	....
Econ. 37—Fundamentals of Economics	....	3
H. E. Ed. 110—Child Development	3	....
H. E. Ed. 112—Play and Play Materials	....	2
Home Mgt. 150, 151—Management of the Home	3	3
Foods 100—Food Economics	2	....
Foods 101—Meal Service	2	....
Bact. 51—Household Bacteriology	....	3
Electives	3	4
Total	16	15
Senior Year		
H. E. Ed. 111—Curriculum, Instruction, and Observation—Nursery School	3	....
H. E. Ed. 118—Teaching Nursery School	....	4-8
Psych. 108—Child Psychology	3	....
Home Mgt. 152—Practice in Management of the Home	....	3
Clo. 123—Children's Clothing	2	....
Nut. 111—Child Nutrition	....	2
Soc. 61—Marriage and the Family	....	3
Eng. 52—Children's Literature	2	....
H. E. Ed. 116, 117—Creative Expression—Art, Music, Dance	3	3
Electives	2	....
Total	15	15

INDUSTRIAL EDUCATION

The program of studies in Industrial Education provides: (a) a four-year curriculum leading to the degree of bachelor of science in industrial education; (b) a program of professional courses to prepare teachers to meet the certification requirements in vocational and occupational schools; (c) a program of courses for the improvement of teachers in service.

Experience in some trade or industrial activity will benefit students preparing to teach industrial subjects. The curriculum is designed to prepare teachers of trade and industrial shop and related subjects, and teachers of industrial arts. Reasonable adaptations of this curriculum are made for trade and industrial teachers in service. Students entering an industrial education curriculum register in the College of Education.

Industrial Education Curriculum

Freshman Year

	Semester I	*Semester II*
Ed. 2—Introduction to Education	2	....
Eng. 1, 2—Composition and American Literature	3	3
Speech 1, 2—Public Speaking	2	2
Soc. I—Sociology of American Life	3	....
Pol. Sci. 1—American Government	....	3
Ind. Ed. 1—Mechanical Drawing	2	....
Ind. Ed. 21—Mechanical Drawing	....	2
Ind. Ed. 2—Elementary Woodworking	2	....
Ind. Ed. 22—Machine Woodworking I	....	2
Math. 10—Algebra	2	....
Math. 11—Trigonometry and Analytic Geometry	....	2
M. I. 1, 2—Basic R. O. T. C.	3	3
Physical Activities	1	1
Total	20	18

Sophomore Year

	Semester I	*Semester II*
Ed. 3—Education Forum	....	1
Eng. 3, 4—Composition and World Literature, or	3	3
Eng. 5, 6—Composition and English Literature	3	3
Hist. 5, 6—History of American Civilization	3	3
Ind. Ed. 24—Sheet Metal Work	2	....
Ind. Ed. 26—Art Metal Work I	....	2
Ind. Ed. 41—Architectural Drawing	2	....
Ind. Ed. 23—Forge Practice	....	1
Math. 7—Solid Geometry	2	....
Math. 12—Analytical Geometry	....	2
Chem. 7, 9—Introductory Chemistry	3	3
M. I. 3, 4—Basic R. O. T. C.	3	3
Physical Activities	1	1
Total	19	19

Junior Year

	Semester I	*Semester II*
Ind. Ed. 67—Cold Metal Work	....	2
Ind. Ed. 69—Machine Shop Practice I	....	2
Ind. Ed. 28—Electricity I	2	....
Ind. Ed. 110—Foundry	1	....
Ind. Ed. 160—Essentials of Design	2	....
Ind. Ed. 140—Curriculum, Instruction, and Observation—Industrial Education	....	3
Ind. Ed. 166—Educational Foundations of Industrial Arts, or	2	....
Ind. Ed. 171—History of Vocational Education	2	....
Psych. 80—Educational Psychology	3	....
Ed. 160—Educational Sociology	....	2
Ed. 130—Theory of the Junior High School, or	2	....
Ed. 131—Theory of the Senior High School	2	....
Phys. 1, 2—Elements of Physics	3	2
Directed Electives in Industrial Education	3	
Electives	....	
Total	18	15

Senior Year	*Semester* *I*	*II*
Ind. Ed. 89—Machine Shop Practice II	2	....
Ind. Ed. 48—Electricity II	....	2
Ind. Ed. 31—Mechanical Drawing	2	....
Ind. Ed. 42—Machine Woodworking II	2	....
Ind. Ed. 164—Shop Organization and Management	....	2
Ed. 150—Educational Measurement	2	....
Ed. 161—Guidance in Secondary Schools	....	2
Ind. Ed. 168—Trade or Occupational Analysis	2	....
Econ. 37—Fundamentals of Economics	....	3
Ed. 148 or 149—Methods and Practice of Teaching	4–9 or	4–9
Electives	....	....
Total	13–17	13–18

HEALTH EDUCATION, PHYSICAL EDUCATION, AND RECREATION

For men three curricula are offered in this department, namely, *health education, physical education* and *recreation.* The work in the freshman and sophomore years is the same in all three curricula.

For women four curricula are offered, namely, *health education, physical education, recreation,* and *pre-physical therapy,* in all of which the freshman and sophomore work is identical.

Freshman and Sophomore Curriculum for Men

Freshman Year	*Semester* *I*	*II*
Zool. 1—General Zoology	4	....
Bact. 1—General Bacteriology	....	4
Eng. 1, 2—Composition and American Literature	3	3
Soc. 1—Sociology of American Life	3	....
G. & P. 1—American Government	....	3
P. E. 30—History and Principles of Physical Education	3	....
Ed. 2—Introduction to Education	....	2
Physical Activities	1	1
M. I. 1, 2—Basic R. O. T. C.	3	3
Nut. 10—Elements of Nutrition	....	3
Total	17	19

Sophomore Year		
Eng. 3, 4—Composition and World Literature	3	3
H. 5, 6—History of American Civilization	3	3
Zool. 14, 15—Human Anatomy and Physiology	4	4
P. E. 40—Hygiene	3	....
Speech 4—Voice and Diction	....	3
Physical Activities	1	1
M. I. 3, 4—Basic R. O. T. C.	3	3
Total	17	17

Physical Education Curriculum for Men

Junior Year

	Semester	
	I	II
Psych. 80—Educational Psychology	3	....
Health 120—Teaching Health	....	2
P. E. 181—Training and Conditioning	1	....
P. E. 45—Track	....	2
Ed. 160—Educational Sociology	2	....
Ed. 140—Curriculum, Instruction, and Observation—Physical Education	....	3
Zool. 53—Physiology of Exercise	2	....
Ed. 130—Theory of the Junior High School	....	2
P. E. 160—Introduction to Recreation	3	....
P. E. 180—Tests and Measurements in Physical Education	....	3
P. E. 60—Gymnastics	3	....
P. E. 63—Officiating	....	2
P. E. 41—Football	2	....
P. E. 57—Combative Sports Skills	....	1
Electives	1	2
Total	17	17

Senior Year

Ed. 143—Methods and Practice Teaching	5	....
P. E. 140—Therapeutics	....	3
P. E. 70—First Aid	2	....
P. E. 171—Organization and Administration of Physical Education	....	3
Ed. 160—Guidance in Secondary Schools	2	....
P. E. 100, 110—Kinesiology	2	2
P. E. 47—Baseball	....	2
P. E. 43—Basketball	2	....
P. E. 53a—Assisting in Intramurals	....	1
P. E. 51—Minor Sports Skills	1	....
Rec. 120—Camping, Administration and Leadership	....	3
P. E. 53—Organization of Intramurals	....	1
Electives	3	2
Total	17	17

Students who carry a major in another teaching field and who wish to prepare to coach interscholastic athletics may develop a minor in physical education by taking 30 semester hours including the following courses:

P. E. 30—History and Principles of Physical Education	3
P. E. 40—Hygiene	3
P. E. 41, 43, 45, 47—Varsity Sports	8
P. E. 181—Training and Conditioning	1
P. E. 63, 63—Officiating	2
P. E. 120—Mental Hygiene in Physical Education	2
P. E. 171—Organization and Administration	3
P. E. 53—Organization of Intramurals	1

Health Education Curriculum for Men

Junior Year

	Semester	
	I	*II*
Bact. 101—Pathogenic Bacteriology	4	....
Science Elective	....	3
Psych. 80—Educational Psychology	3	....
Hea. 120—Teaching Health	....	2
P. E. 100, 110—Kinesiology	2	2
Hea. 110—Health Service and Health Supervision	3	....
Psych. 17—Mental Hygiene	....	3
P. E. 51—Minor Sports Skills	1	....
H. E. Ed. 110—Child Development	....	3
P. E. 53—Organization of Intramurals	....	1
Ed. 150—Educational Measurements	2	....
Electives	2	3
Total	17	17

Senior Year

Ed. 147—Audio-Visual Education	2	....
P. E. 50—Safety Education	....	3
P. E. 70—First Aid	2	....
Hea. 130—Organization and Administration of Health Education	....	3
Nut. 113—Diet and Disease	2	....
P. E. 140—Therapeutics	....	3
Zool. 53—Physiology of Exercise	2	....
Bact. 108—Epidemiology and Public Health	....	3
Ed. 143—Methods and Practice Teaching in Health Education	5	....
Ed. 130—Theory of Junior High School	....	2
P. E. 150—Recreational Dance	2	....
P. E. 181—Training and Conditioning	1	....
Electives	1	3
Total	17	17

Recreation Curriculum for Men

Junior Year

P. E. 160—Introduction to Recreation	3	....
Pr. Art 2—Survey Art History	....	2
Psych. 80—Educational Psychology	3	....
Rec. 110—Nature Lore	....	3
Mus. 1—Music Appreciation	3	....
Soc. 81—Introduction to Social Work	....	3
Soc. 126—Juvenile Delinquency	3	....
Ed. 160—Educational Sociology	....	2
P. E. 41—Football	2	....
Rec. 120—Camp Administration and Leadership	....	3
P. E. 150—Recreational Dance	2	....
P. E. 45—Track	....	2
P. E. 170—Recreational Dance	....	2
Electives	1	....
Total	17	17

Senior Year	*—Semester—* *I*	 *II*
Ed. 147—Audio-Visual Education	2	....
Rec. 100—Co-recreational Program	....	3
P. E. 70—First Aid	2	....
Ed. 152—The Adolescent: Characteristics and Problems	....	3
Rec. 130—Observation and Service in Recreation	5	....
Rec. 140—Organization and Administration of Recreation	....	2
P. E. 43—Basketball	2	....
P. E. 47—Baseball	....	2
P. E. 51—Minor Sports Skills	1	....
P. E. 63—Officiating	....	2
P. E. 53—Organization of Intramurals	1	....
Cr. 3—Simple Crafts	....	2
Electives	4	3
Total	17	17

Freshman-Sophomore Curriculum for Women

Freshman Year		
Zool. 1—General Zoology	4	....
Eng. 1, 2—Composition and American Literature	3	3
Soc. 1—Sociology of American Life	3	....
Bact. 1—General Bacteriology	....	4
G. & P. 1—American Government	....	3
Ed. 2—Introduction to Education	....	2
Nut. 10—Elements of Nutrition	....	3
P. E. 30—History and Principles of Physical Education	3	....
P. E. 62, 64—Techniques of Sport Skills	2	2
P. E. 52, 54—Dance Techniques	2	2
Total	17	19

Sophomore Year		
Eng. 3, 4—Composition and World Literature	3	3
H. 5, 6—History of American Civilization	3	3
Zool. 14, 15—Human Anatomy and Physiology	4	4
Speech 4—Voice and Diction	....	3
P. E. 40—Hygiene	3	....
P. E. 66, 68—Techniques of Sport Skills	2	2
P. E. 56, 58—Dance Techniques	2	2
Total	17	17

Physical Education Curriculum for Women

Junior Year

	Semester	
	I	II
Psych. 80—Educational Psychology	3	....
Ed. 160—Educational Sociology	2	....
Zool. 53—Physiology of Exercise	2	....
Hea. 120—Teaching Health	....	2
Ed. 140—Curriculum, Instruction, and Observation—Physical Education	....	3
Ed. 130—Theory of Junior School	....	2
P. E. 160—Introduction to Recreation	3	....
P. E. 102, 104—Techniques of Sport Skills	2	2
P. E. 150, 170—Recreational Dance	2	2
P. E. 180—Tests and Measurements in Physical Education	....	3
P. E. 100, 110—Kinesiology	2	2
Electives	1	1
Total	17	17

Senior Year

Ed. 143—Methods and Practice of Teaching	5	....
Ed. 160—Guidance in Secondary Schools	2	....
Rec. 120—Camp Administration and Leadership	....	3
P. E. 70—First Aid	2	....
P. E. 140—Therapeutics	....	3
P. E. 124, 126—Coaching and Officiating	2	2
P. E. 106, 108—Techniques of Sport Skills	2	2
P. E. 116—Organization and Administration of Physical Education	....	3
Electives	1	1
Total	17	17

Health Education Curriculum for Women

Junior Year

Science Elective	....	3
Psych. 80—Education Psychology	3	....
Hea. 110—Health Service and Health Supervision in Schools	3	...
Hea. 112—Home Nursing	2	....
Ed. 150—Educational Measurement	2	....
Bact. 101—Pathogenic Bacteriology	4	....
Hea. 120—Teaching Health	....	2
Psych. 17—Mental Hygiene	....	3
H. E. Ed. 110—Child Development	....	3
P. E. 100, 110—Kinesiology	2	2
P. E. 102, 104—Techniques of Sport Skills	2	2
Electives	....	1
Total	18	16

Senior Year

	Semester I	Semester II
Ed. 147—Audio-Visual Education	2	....
Nut. 113—Diet and Disease	2	....
Zool. 53—Physiology of Exercise	2	....
Ed. 143—Methods and Practice of Teaching in Health Education	5	....
Hea. 130—Organization and Administration of Health Education	....	3
Bact. 108—Epidemiology and Public Health	....	3
Ed. 130—Theory of Junior High School	....	2
P. E. 70—First Aid	2	....
P. E. 150—Recreational Dance	2	....
P. E. 50—Safety Education	....	3
P. E. 140—Therapeutics	....	3
Electives	2	3
Total	17	17

Recreation Curriculum for Women

Junior Year

	Semester I	Semester II
Psych. 80—Education Psychology	3	....
Mus. 1—Music Appreciation	3	....
Soc. 126—Juvenile Delinquency	3	....
Pr. Art. 2—Survey of Art History	....	2
Rec. 110—Nature Lore	....	3
Soc. 81—Introduction to Social Work	....	3
Ed. 160—Educational Sociology	....	2
Rec. 120—Camp Administration and Leadership	....	3
P. E. 160—Introduction to Recreation	3	....
P. E. 102, 104—Techniques of Sport Skills	2	2
P. E. 150, 170—Recreational Dance	2	2
Electives	....	2
Total	17	17

Senior Year

	Semester I	Semester II
Ed. 147—Audio-Visual Education	2	....
Rec. 130—Observation and Service in Recreation	5	....
Ed. 152—The Adolescent: Characteristics and Problems	....	3
Rec. 140—Organization and Administration of Recreation	....	2
Cr. 3—Simple Crafts	....	2
P. E. 70—First Aid	2	....
P. E. 106, 108—Techniques of Sport Skills	2	2
Rec. 100—Co-recreational Program	....	3
P. E. 126—Coaching and Officiating	....	2
Electives	6	3
Total	17	17

Pre-physical Therapy Curriculum for Women

Junior Year

	Semester I	Semester II
Psych. 80—Educational Psychology	3	....
P. E. 100, 110—Kinesiology	2	2
Chem. 11, 13—General Chemistry	3	3
Zool. 53—Physiology of Exercise	2	....
Psych. 17—Mental Hygiene	3	....
P. E. 102, 104—Techniques of Sport Skills	2	2
P. E. 150, 170—Recreational Dance	2	2
Soc. 81—Introduction to Social Work	....	3
Cr. 3—Simple Crafts	....	2
Electives	....	3
Total	17	17

Senior Year

	Semester I	Semester II
Phys. 1, 2—Elements of Physics	3	3
P. E. 70—First Aid	2	..
Zool. 55—Development of the Human Body	2	....
Psych. 108—Child Psychology	3	....
P. E. 106, 108—Techniques of Sport Skills	2	2
Soc. 126—Juvenile Delinquency	....	3
Psych. 118—Psychology of Adolescence	....	3
P. E. 140—Therapeutics	....	3
Electives	5	3
Total	17	17

COLLEGE OF ENGINEERING

S. S. Steinberg, *Dean*
Margaret G. Engle, *Secretary to Dean*

The College of Engineering will, after the current year and in future catalogues, be known as the Glenn L. Martin College of Engineering and Aeronautical Sciences. The present College of Engineering is now undergoing a reorganization which is expected will be completed before September, 1947. This reorganization involves a continuation and expansion of the present departments and the establishment, within the College, of an Institute for Advanced Technological Studies. This Institute will carry on full-time research in connection with an organization known as the State Institute for Industrial Research authorized by the last Legislature to be under the direction of the Board of Regents of the University, and also will carry on studies in the various departments leading to graduate degrees.

The primary purpose of the College of Engineering is to train young men to practice the profession of Engineering. It endeavors at the same time to equip them for their duties as citizens and for careers in public service and in industry.

In training professional engineers it has become evident that greater emphasis than heretofore must be placed on the fundamentals of mathematics, science and engineering so as to establish a broad professional base. Experience has also shown the value of a coordinated group of humanistic-social studies for engineering students since their later professional activities are so closely identified with the public.

Accordingly, our engineering curriculums have been revised to increase the time devoted to fundamentals and to non-technical subjects, which are a necessary part of the equipment of every educated man. It is well recognized that an engineering training affords an efficient preparation for many callings in public and private life outside the engineering profession.

The length of the normal curriculum in the College of Engineering is four years and leads to the bachelor's degree. In the case of most students these four years give the engineering graduate the basic and fundamental knowledge necessary to enter upon the practice of the profession. Engineering students whose scholastic records are superior are advised to supplement their undergraduate programs by at least one year of graduate study leading to the master's degree. Graduate programs will be arranged upon application to the chairman of the engineering department concerned.

In order to give the new student time to choose the branch of engineering for which he is best adapted, the freshman year of the several curriculums is the same. Lectures and conferences are used to guide the student in making a proper choice. The courses differ only slightly in the sophomore year, but in the junior and senior years the students are directed definitely along professional lines.

The College of Engineering includes the Departments of Aeronautical, Chemical, Civil, Electrical, and Mechanical Engineering. Under a large gift recently received by the University from the Glenn L. Martin Company of Baltimore, supplemented with funds from the State of Maryland, it is planned to expand the activities of the College, to erect a new physical plant, and to broaden the scope of its engineering and industrial research.

Admission Requirements

The requirements for admission to the College of Engineering are, in general, the same as elsewhere described for admission to the undergraduate departments of the University, except as to the requirements in mathematics. See Admission, Section I.

It is possible, however, for high school graduates having the requisite number of entrance units to enter the College of Engineering without the unit of advanced algebra, or the one-half unit of solid geometry. The program for such students would be as follows: during the first semester, five hours a week would be devoted to making up advanced algebra and solid geometry; in the second semester, mathematics of the first semester would be scheduled, and the second semester mathematics would be taken in the third semester.

Bachelor Degrees in Engineering

Courses leading to the degree of Bachelor of Science are offered in aeronautical, chemical, civil, electrical, and mechanical engineering.

Master of Science in Engineering

The degree of Master of Science in Engineering may be earned by students registered in the Graduate School who hold bachelor degrees in engineering, which represent an amount of preparation and work similar to that required for bachelor degrees in the College of Engineering of the University of Maryland.

Candidates for the degree of Master of Science in Engineering are accepted in accordance with the procedure and requirements of the Graduate School. See Graduate School, Section II.

Professional Degrees in Engineering

The degrees of Aeronautical Engineer, Chemical Engineer, Civil Engineer, Electrical Engineer, and Mechanical Engineer will be granted only to graduates of the University who have obtained a bachelor's degree in engineering. The applicant must satisfy the following conditions:

1. He shall have engaged successfully in acceptable engineering work not less than four years after graduation.
2. He must be considered eligible by a committee composed of the Dean of the College of Engineering and the heads of the Departments of Aeronautical, Chemical, Civil, Electrical, and Mechanical Engineering.

3. His registration for a degree must be approved at least twelve months prior to the date on which the degree is to be conferred. He shall present with his application a complete report of his engineering experience and an outline of his proposed thesis.

4. He shall present a satisfactory thesis on an approved subject.

Equipment

The Engineering buildings are provided with lecture-rooms, recitation-rooms, drafting-rooms, laboratories, and shops for various phases of engineering work.

Drafting-Rooms. The drafting-rooms are fully equipped for practical work. The engineering student must provide himself with an approved drawing outfit, supplies, and books.

Chemical Engineering Laboratories. For instruction and research, the Chemical Engineering Department maintains laboratories for (1) General Testing and Control; (2) Unit Operations; (3) Cooperative Research; (4) Graduate Research.

General Testing and Control Laboratory. In this laboratory there is available complete equipment for the chemical and physical testing of water, gases, coal, petroleum, and their by-products; and for general industrial chemicals, both inorganic and organic.

Unit Operations Laboratory. This laboratory contains equipment for the study of fluid flow, heat flow, drying, filtration, distillation, evaporation, crushing, grinding, combustion, gas absorption, extraction, and centrifuging. Organic process equipment includes an autoclave, nitrator, reducer, and mixing kettle. For the study of fluid flow a permanent hydraulic assembly is available, and this includes flow meters of most types.

In the laboratory there is a large column still with a kettle capacity of 100 gallons, equipped for the measurement of temperature and pressure, sampling devices, condensers, and vacuum receivers. This still is so designed that it can be used either as a batch type unit, continuous feed type, direct pot still, steam still, or as a vacuum still. Studies in evaporation can be made on a double effect evaporator, one unit of which is equipped with a horizontal tube bundle and the other with a vertical tube bundle. This evaporator is equipped with vacuum and pressure gauges, stirrer, wet vacuum pump, condensate pump, and salt filter. Gas absorption equipment includes a blower and a stoneware column packed with different types of packings in respective sections so that comparative studies may be made. The organic process equipment is all self-driven and designed to afford flexibility in use. Filtration studies may be made either on a large plate and frame press or on the ordinary Sweetland type press. Combustion equipment available consists of an industrial carburetor; pot furnace, premix gas fired furnace and the usual gas analysis equipment. For grinding there is a jaw crusher, a disc crusher, and a ball mill. A mechanical shaker and standard sieve are available for particle size separation. Shop facilities include a lathe, drill press, grinder, welding equipment, and other tools necessary for unit operation and research studies.

Cooperative and Graduate Research Laboratories. These laboratories are arranged to permit the installation of such special equipment as the particular problems under consideration may require. Effort is made to maintain cooperation with the industries of Maryland and the Chemical Engineering activities of the State and Federal governments; for such work important advantages accrue because of the location of the Eastern Experiment Station of the United States Bureau of Mines on the University campus.

Electrical Machinery Laboratories. There is provided a motor-generator set, consisting of a synchronous motor and a compound direct-current generator with motor and generator control panels, to furnish direct current for testing purposes. Through a distribution switchboard, provision is made for distributing to the various laboratories direct current at 125 volts, and alternating current, single-phase, and three-phase, at 110 and 220 volts.

High-current potential dividers and auto-transformers are available at the testing stations for individual voltage control. A single-phase induction regulator with control panel is also available for voltage regulation of experimental circuits. At the individual testing stations, use is made of specially constructed instrument tables which are designed to facilitate measurements in fundamental, direct-current machinery, and alternating-current machinery experiments.

The test equipment includes a variety of direct- and alternating-current generators and motors, distribution transformers, a synchronous converter, an induction regulator, and modern control apparatus. Most of the machines are of modern construction and of such size and design as to give typical performance characteristics. Flexibility of operation is provided in several ways: for example, direct-current machines and alternating-current machines are mounted on common bases with provisions for easy mechanical coupling and any machine may be readily connected electrically to any other machine through a common distribution panel. Metering and control boards are provided for rapid change of operating conditions with any machine. Water-cooled prony brakes are available for machine testing.

Included in the test equipment are the measuring instruments essential for practical electrical testing, namely, ammeters, voltmeters, wattmeters, watthourmeters, frequency meters, tachometers, stroboscopes, Wheatstone bridges, impedance bridges, and oscillographs.

Illumination Laboratory. The equipment includes electric lamps, shades, and reflectors of various types; bar photometers for determination of candle-power distribution of incandescent lamps; and four types of portable photometers for the measurement of illumination intensities. Several rather large fluorescent light installations are available for study in nearby rooms.

Electrical Measurements Laboratory. The calibrating equipment consists of standards of potential and resistance which are used in conjunction with modern potentiometers to maintain calibration of a standard ammeter, voltmeter, and watthourmeter. Secondary standards of potential, resistance, inductance, capacitance, and frequency are available. Auxiliary devices such as oscillators, amplifiers, rectifiers, wavemeters, bridges, and galvanometers are also available.

A five-machine motor-generator set delivers voltages and currents, both alternating and direct, to test tables for meter testing. Equipment is also available for the experimental study of electric and magnetic fields, nonlinear circuit elements and other topics in the field of electricity and magnetism.

Electronics Laboratory. This laboratory is housed in the same room as the measurements laboratory thereby permitting direct use of the measurements equipment. A wide variety of vacuum tubes, gas-filled tubes, and photo-tubes is provided for studying tube characteristics. Associated equipment is also provided for making quantitative studies of emission, rectification, amplification, and oscillation. This equipment includes cathode-ray oscillographs, vacuum-tube voltmeters, micro-voltmeters, audio oscillators, signal generators, and a-c and d-c bridges.

Electrical Communications Laboratory. Equipment for studying both wire and wireless communication is provided. Transmission circuits, including artificial lines, filter sections, attenuation sections, and coupling devices are provided.

Audio-frequency, high-frequency, and ultra-high-frequency oscillators together with standard signal generators and other standard measuring equipment are available. Several demonstration radio receivers and transmitters are used in laboratory tests involving radio frequencies and several wave guide configurations and antenna arrays are employed in ultra-high-frequency testing.

Mechanical Engineering Laboratories. These laboratories are equipped for research and practice in thermodynamics, heat transmission, fuels and lubricants, steam power, internal combustion engines, refrigeration, air conditioning and heating and ventilation.

The apparatus in the steam power and heat transfer laboratory consists of steam engines equipped with Prony brakes, two-stage steam driven air compressor, mechanical indicators, planimeters, pumps, gauges and their testing equipment, feed water heaters, steam condensers, injectors and ejectors, and a steam turbine generator set.

The fuels and lubricants equipment consists of bomb and gas calorimeters, viscosimeter, octane and octane rating engines, hydrometers, chemical balances, drying ovens, and exhaust gas analyzing equipment.

For internal combustion engine laboratory practice and research there are available: Waukesha Diesel engine research unit with electric dynamometer, National Advisory Committee for Aeronautics variable compression ratio research engine, single and multi-cylinder gasoline engines, radial aircraft engine, R.C.A. piezo-electric high speed engine indicator, vibration measuring equipment, and exhaust pyrometers.

A refrigeration and air conditioning unit, fans, flowmeters, and two heating and ventilation units are also available.

Metallography Laboratory. This laboratory is equipped for the physical study of metals. Research and practice can be carried out in this laboratory in the following fields: crystallography and alloy systems, heat treatment and strength of materials, and macro and micro examination of metals. Included also are controlled heat treating and melting furnaces, bakelite mold press, polishing wheels, etching equipment, microscopes, photographic equipment, Rockwell hardness tester, Jominy and quench testing equipment, creep testing machine, cutting off wheels, thermocouples and pyrometers, and other special instruments.

The laboratory has a Bausch and Lomb I L S metalloscope for producing photomicrographs up to 2,000 magnifications.

Aeronautical Laboratory. The present aeronautical laboratory is equipped for practice and research in engines, metal aircraft construction, structural tests, vibration and noise, and aerodynamics. A three-foot return type wind tunnel, fully equipped with balances and other instruments and electrically operated, has been constructed for standard experiments in aerodynamics and for student thesis research.

A sheet metal shop equipped to construct components of aircraft structures in aluminum alloy and steel is available. This shop includes such equipment as automatic air riveting hammer, planishing machines, squaring shears, rolls, brake, heat treating furnace, etc. A small machine shop is also available for students in constructing research apparatus. Variable speed motors are available for experiments in vibration and noise.

The laboratory also includes a research spot welding machine, a sixty-thousand-pound Baldwin-Southwark aircraft universal testing machine, Tuckerman gauges, oscillographs with accessories, and a Timby hydraulic jack system for static testing.

Hydraulics Laboratory. The equipment consists of electrically driven centrifugal pumps, measuring tanks, various types of weirs, venturi meters, nozzles, Pelton water wheel with Prony brake built especially for laboratory use, hook gauges, dial gauges, tachometers, stop watches, and other apparatus necessary for the study of the flow characteristics of water.

Materials Testing Laboratories. Apparatus and equipment are provided for making standard tests on various construction materials, such as sand, gravel, steel, concrete, timber, and brick.

Equipment includes a 300,000-pound hydraulic testing machine, two 100,000-pound universal testing machines, torsion testing machine, impact testing machine, Rockwell, Brinnell and Shore hardness testers, abrasion testing machine, rattler, constant temperature chamber, cement-testing apparatus, extensometer and micrometer gauges, and other special devices for ascertaining the elastic properties of different materials.

Special apparatus which has been designed and made in the shops of the University is also available for student work.

The College of Engineering owns a Beggs deformeter apparatus for the mechanical solution of stresses in structures by use of celluloid models. Equipment is also available for study of models by the photo-elastic method.

Engineering Soils Laboratory. Equipment is available for performing the usual tests on engineering soils. This includes apparatus for grain size analysis, Atterberg limits, permeability, optimum moisture content for compaction, Proctor penetration, and consolidation.

Research Foundation. The National Sand and Gravel Association has, by arrangement with the College of Engineering, established its testing and research laboratory at the University. The purpose of the Research Foundation thus organized is to make available to the Association additional facilities for its investigational work, and to provide for the College of Engineering additional facilities and opportunities for increasing the scope of its engineering research.

Machine Shops and Foundry. The machine shops and foundry are well lighted and fully equipped. Shops for wood working, metal, forge, and foundry practice are provided.

The wood-working shop has full equipment of hand and power machinery.

The machine shops are equipped with various types of lathes, planers, milling machines, drill presses, shaper, midget mill, and precision boring head. Equipment is available for gas and electric arc welding.

The shop equipment not only furnishes practice, drill, and instruction for students, but makes possible the complete production of special apparatus for conducting experimental and research work in engineering.

Surveying Equipment. Surveying equipment for plane, topographic, and geodetic surveying is provided properly to equip several field parties. A wide variety of surveying instruments is provided, including domestic as well as foreign makes, and stereoscopic instruments are available for the interpretation and use of aerial photographs.

Special Models and Specimens. A number of models illustrating various types of highway construction and highway bridges are available.

A wide variety of specimens of the more common minerals and rocks has been collected from various sections of the country, particularly from Maryland.

Engineering Library

In addition to the general University Library, each department maintains a library for reference, and receives the standard engineering magazines. The class work, particularly in advanced courses, requires that students consult special books of reference and current technical literature.

The Davis Library of Highway Engineering and Transport, founded by Dr. Charles H. Davis, President of the National Highways Association, is part of the Library of the College of Engineering. The many books, periodicals, pamphlets, and other items included in this library cover all phases of highway engineering, highway transportation, and highway traffic control.

There has also been donated to the College of Engineering the transportation library of the late J. Rowland Bibbins of Washington, D. C. The books and reports in this library deal with urban transportation problems, including railroads, street cars, subways, busses, and city planning.

Curricula

The normal curriculum of each department is outlined on the following pages. Students are expected to attend and take part in the meetings of the student chapters of the technical engineering societies.

Freshman engineering students are given a special course of lectures by practicing engineers covering the work of the several engineering professional fields. The purpose of this course is to assist the freshman in selecting the particular field of engineering for which he is best adapted. The student is required to submit a brief written summary of each lecture. A series of engineering lectures for upper classmen is also provided. These are given by prominent practicing engineers in the various branches of the profession.

Student branches of the following national technical societies are established in the College of Engineering: American Institute of Chemical Engineers, American Society of Civil Engineers, American Institute of Electrical Engineers, and American Society of Mechanical Engineers. The student branches meet regularly for the discussion of topics dealing with the various fields of engineering.

A student in the College of Engineering will be certified as a junior when he shall have passed at least 68 semester credit hours with an average grade of C or higher.

The proximity of the University to Baltimore and Washington, and to other places where there are large industrial enterprises, offers an excellent opportunity for the engineering student to observe what is being done in his chosen field. An instructor accompanies students on all inspection trips, and the student is required to submit a written report of each trip.

BASIC CURRICULUM FOR ALL FRESHMAN STUDENTS IN THE COLLEGE OF ENGINEERING

All freshman students are required to take the following curriculum during their first year:

Freshman Year	*Semester* I	*Semester* II
Eng. 1, 2—Composition and Readings in American Literature	3	3
Speech 7—Public Speaking	....	2
*Math. 14—Plane Trigonometry	2	....
*Math. 15—College Algebra	3	....
Math. 17—Analytic Geometry	....	4
Chem. 1, 3—General Chemistry	4	4
Dr. 1, 2—Engineering Drawing	2	2
Engr. 1—Introduction to Engineering	1	....
M. I. 1, 2—Basic R. O. T. C.	3	3
Physical Activities	1	1
Total	19	19

AERONAUTICAL ENGINEERING

Aeronautical Engineering deals with the design, construction, and maintenance of aircraft and aircraft power plants; aerodynamics and performance of aircraft; structural design and mechanical equipment; and the organization and operation of industrial aircraft plants.

Aeronautical Engineering Curriculum

Sophomore Year	*Semester* I	*Semester* II
G. & P. 1—American Government	3	....
Soc. 7—Sociology of American Life	....	3
Math. 20, 21—Calculus	4	4
Phys. 20, 21—General Physics	5	5
Surv. 1—Plane Surveying	....	2
Dr. 3—Advanced Engineering Drawing	2	....
Shop 1—Machine Shop Practice	2	....
Shop 2—Foundry Practice	....	1
Mech. 2—Statics and Dynamics	....	5
M. I. 3, 4—Basic R. O. T. C.	3	3
Physical Activities	1	1
Total	20	20

---

*A qualifying test is given at the close of the first two weeks to determine whether the student is adequately prepared for Math. 14 and 15. A student failing this test is required to take Math. 1, Introductory Algebra, without credit.

	Semester	
Junior Year	*I*	*II*
Eng. 3, 4—Composition and Readings in World Literature	3	3
Math. 64—Differential Equations for Engineers	3	....
Mech. 2—Statistics and Dynamics	5	....
Mech. 20—Strength of Materials	....	5
M. E. 53—Metallography	3	....
M. E. 100—Thermodynamics	....	3
Aero. E. 101—Aerodynamics	....	3
Aero. E. 103—Airplane Detail Drafting	1	....
Aero. E. 104—Airplane Layout Drafting	....	1
E. E. 51, 52—Principles of Electrical Engineering	4	4
Total	19	19

Senior Year		
H. 5, 6—History of American Civilization	3	3
Aero. E. 102—Aerodynamics	2	....
Aero. E. 105, 106—Airplane Fabrication Shops	1	2
Aero. E. 107, 108—Airplane Design	4	4
Aero. E. 109, 110—Aircraft Power Plants	4	4
Aero. E. 111, 112—Aeronautical Laboratory	2	2
Aero. E. 113, 114—Mechanics of Aircraft Structures	3	3
Total	19	18

CHEMICAL ENGINEERING

Chemical Engineering deals primarily with the industrial and economic transformation of matter. It seeks to assemble and develop information on chemical operations and processes of importance in modern life and to apply this under executive direction, according to engineering methods, for the attainment of economic objectives. Modern chemical research has contributed so much to industrial and social welfare that the field of the chemical engineer may now be said to cover practically every operation in which any industrial material undergoes a change in its chemical identity.

Chemical Engineering Curriculum

	Semester	
Sophomore Year	*I*	*II*
G. & P. 1—American Government	3	....
Math. 20, 21—Calculus	4	4
Phys. 20, 21—General Physics	5	5
Chem. 19—Quantitative Chemical Analysis	4	....
Ch. E. 10—Water, Fuels and Lubricants	....	4
Surv. 1—Elements of Plane Surveying	....	2
M. I. 3, 4—Basic R. O. T. C.	3	3
Physical Activities	1	1
Total	20	19

	Semester	
Junior Year	*I*	*II*
Eng. 3, 4—Composition and Readings in World Literature	3	3
Econ. 31, 32—Principles of Economics	3	3
Ch. E. 103, f, s.—Elements of Chemical Engineering	3	3
Chem. 187, 189—Elements of Physical Chemistry Lectures	3	3
Chem. 188, 190—Physical Chemistry Laboratory	2	2
Ch. E. 108 f, s.—Chemical Technology	2	2
Chem. 35, 37—Elementary Organic Chemistry Lectures	2	2
Total	18	18
Senior Year		
*H. 5, 6—History of American Civilization	3	3
Ch. E. 105 f, s.—Advanced Unit Operations	5	5
Ch. E. 109 f, s.—Chemical Engineering Thermodynamics	2	2
**Ch. E. 110—Advanced Chemical Engineering Calculations	3	...
Ch. E. 107—Fuels and their Utilization	3	...
E. E. 51, 52—Principles of Electrical Engineering	4	4
Mech. 2—Statics and Dynamics	...	5
Ch. E. 104 f, s—Seminar	1	1
Total	21	20

CIVIL ENGINEERING

Civil Engineering deals with the design, construction, and maintenance of highways, railroads, waterways, bridges, buildings, water supply and sewerage systems, harbor improvements, dams, and surveying and mapping.

Civil Engineering Curriculum

	Semester	
Sophomore Year	*I*	*II*
G. & P. 1—American Government	3	...
Soc. 7—Sociology of American Life	..	3
Math. 20, 21—Calculus	4	4
Phys. 20, 21—General Physics	5	5
Dr. 3—Advanced Engineering Drawing	2	..
Mech. 1—Statics and Dynamics	....	3
Surv. 1, 2—Plane Surveying	2	2
M. I. 3, 4—Basic R. O. T. C.	3	3
Physical Activities	1	1
Total	20	21

---

* Students who are to become candidates for graduate degrees requiring foreign language may elect instead a foreign language and secure the American History credit in their graduate program.

** Under some conditions, Math. 66—Applied Calculus, will be assigned as a substitute for Ch. E. 110—Chemical Engineering Calculations.

Junior Year

	Semester	
	I	*II*
Eng. 3, 4—Composition and Readings in World Literature	3	3
Speech 108—Public Speaking	....	2
Math. 16—Spherical Trigonometry	2	....
Geol. 2—Engineering Geology	....	2
Mech. 50—Strength of Materials	4	....
Mech. 53—Materials of Engineering	....	2
C. E. 50—Hydraulics	....	3
C. E. 52—Curves and Earthwork	3	....
C. E. 100—Theory of Structures	....	4
Surv. 100—Advanced Surveying	4	....
M. E. 50—Principles of Mechanical Engineering	3	....
E. E. 50—Principles of Electrical Engineering	....	3
Total	19	19

Senior Year

	Semester	
	I	*II*
H. 5, 6—History of American Civilization	3	3
Econ. 37—Fundamentals of Economics	3	....
Engr. 100—Engineering Contracts and Specifications	....	2
Eng. 7—Technical Writing	....	2
Bact. 54—Lectures in Sanitary Bacteriology	1	....
C. E. 101—Elements of Highways	3	....
C. E. 102—Structural Design	6	....
C. E. 103—Concrete Design	....	6
C. E. 104—Water Supply	3	....
C. E. 105—Sewerage	....	3
C. E. 106—Soil Mechanics	....	3
Total	19	19

ELECTRICAL ENGINEERING

Electrical Engineering deals with the generation, transmission, and distribution of electrical energy; electrical transportation, communication, illumination, and manufacturing; and miscellaneous electrical applications in industry, commerce, and home life

Electrical Engineering Curriculum

Sophomore Year

	Semester	
	I	*II*
G. & P. 1—American Government	3	....
Soc. 7—Sociology of American Life	3	....
Phys. 20, 21—General Physics	5	5
Phys. 20, 21—General Physics	5	5
Mech. 1—Statics and Dynamics	....	3
Surv. 1—Plane Surveying	2	....
E. E. 1—Electrical Engineering Fundamentals I	....	4
M. I. 3, 4—Basic R. O. T. C.	3	3
Physical Activities	1	1
Total	18	20

	Semester	
Junior Year	I	II
Eng. 3, 4—Composition and Readings in World Literature	3	3
Mech. 51—Strength of Materials	3	....
C. E. 51—Hydraulics	....	3
Math. 64—Differential Equations	3	....
E. E. 60—Electrical Engineering Fundamentals II	4	....
E. E. 65—Direct Current Machinery	....	4
E. E. 100—Alternating Current Circuits	6	....
E. E. 101—Engineering Electronics	....	6
E. E. 104—Communication Networks	....	3
Total	19	19

Senior Year		
H. 5, 6—History of American Civilization	3	3
M. E. 51—Thermodynamics	4	....
M. E. 52—Power Plants	....	4
E. E. 102, 103—Alternating Current Machinery	4	4
E. E. 105, 106—Radio Engineering	4	4
*Electrical Engineering Elective	3	3
Total	18	18
E. E. 113—Electric Railways	3	....
E. E. 114—Applied Electronics	3	....
E. E. 108—Electric Transients	....	3
E. E. 109—Ultra-High-Frequency Phenomena	....	3
E. E. 112—Illumination	....	3

MECHANICAL ENGINEERING

Mechanical Engineering deals with the design, construction, and maintenance of machinery and power plants; heating, ventilation, and refrigeration; and the organization and operation of industrial plants.

Mechanical Engineering Curriculum

	Semester	
Sophomore Year	I	II
G. & P. 1—American Government	3	....
Soc. 7—Sociology of American Life	....	3
Math. 20, 21—Calculus	4	4
Phys. 20, 21—General Physics	5	5
Surv. 1—Plane Surveying	....	2
Dr. 3—Advanced Engineering Drawing	2	....
Shop 1—Machine Shop Practice	2	....
Shop 2—Foundry Practice	....	1
Shop 3—Machine Shop Practice	....	1
M. I. 3, 4—Basic R. O. T. C.	3	3
Physical Activities	1	1
Total	20	20

---

*Two of the following courses may be elected:

—Semester—

Junior Year—General Option

	I	II
Eng. 3, 4—Composition and Readings in World Literature	3	3
Math. 64—Differential Equations for Engineers	3	....
Mech. 2—Statics and Dynamics	5	....
Mech. 50—Strength of Materials	....	5
E. E. 51, 52—Principles of Electrical Engineering	4	4
M. E. 53—Metallography	....	3
M. E. 54—Fluid Mechanics	....	3
M. E. 100—Thermodynamics	3	....
Total	18	18

Junior Year—Aeronautical Option

	I	II
Eng. 3, 4—Composition and Readings in World Literature	3	3
Math. 64—Differential Equations for Engineers	3	...
Mech. 2—Statics and Dynamics	5	..
Mech. 50—Strength of Materials	....	5
E. E. 51, 52—Principles of Electrical Engineering	4	4
M. E. 53—Metallography	....	3
M. E. 54—Fluid Mechanics	....	3
M. E. 100—Thermodynamics	3	....
Total	18	18

Senior Year—General Option

	I	II
Engr. 100—Engineering Contracts and Specifications	....	2
H. 5, 6—History of American Civilization	3	3
M. E. 101—Heat Transfer	2	....
M. E. 102—Heating and Ventilation	3	....
M. E. 103—Refrigeration	....	3
M. E. 104, 105—Prime Movers	4	4
M. E. 106, 107—Mechanical Engineering Design	4	4
M. E. 108, 109—Mechanical Laboratory	2	2
Total	18	18

Senior Year—Aeronautical Option

	I	II
Engr. 100—Engineering Contracts and Specifications	....	2
H. 5, 6—History of American Civilization	3	3
Aero. E. 113, 114—Mechanics of Aircraft Structures	3	3
M. E. 101—Heat Transfer	2	....
M. E. 104, 105—Prime Movers	4	4
M. E. 106, 107—Mechanical Engineering Design	4	4
M. E. 108, 109—Mechanical Laboratory	2	2
Total	18	18

AGRICULTURE — ENGINEERING

A five-year combined program in Agriculture and Engineering, arranged jointly by the College of Agriculture and the College of Engineering, permits students to become candidates for the degree of Bachelor of Science in Agriculture at the end of four years and for the degree of Bachelor of Science in Civil, Electrical, Mechanical, or Chemical Engineering at the end of the fifth year.

Details of this program will be found listed in this catalog under College of Agriculture.

STANTON WALKER FELLOWSHIP OF THE NATIONAL SAND AND GRAVEL ASSOCIATION RESEARCH FOUNDATION

The University of Maryland, in cooperation with the National Sand and Gravel Association, offers a fellowship for research on appropriate problems related to the sand and gravel industry. Fellows enter upon their duties on July 1, and continue for 12 months, including one month for vacation. Payments under the fellowship are made at the end of each month and amount to $600 for the year.

Fellows register as students in the Graduate School of the University of Maryland. Class work will be directed by the heads of the departments of instruction, but about half of the time will be spent in research work. The faculty supervisor will be the Professor of Civil Engineering of the University of Maryland.

This fellowship is open to graduates in Engineering from an accredited college or university, who are qualified to undertake graduate study and research work leading to a Master's degree. Applications should be accompanied by a certified copy of college record, applicant's recent photograph, statement of technical and practical experience (if any), and letters from three persons, such as instructors or employers, covering specifically the applicant's character, ability, education, and experience.

The applications should be addressed: Dean, College of Engineering, University of Maryland, College Park, Md.

ENGINEERING SHORT COURSES

Through short courses, the College of Engineering carries the benefits of engineering teaching to persons and industries in various parts of the State. These courses offer, in addition to regular instruction, an opportunity for the discussion of problems of interest to those engaged in public works, in public health and in public safety.

Mining Extension Classes. In cooperation with the Maryland Bureau of Mines and the State Departments of Education of Allegany and Garrett Counties, night mining classes are conducted throughout the year in several training centers in the western part of the State. The subjects studied are coal mine gases, coal mine ventilation, map reading, and mine safety

Volunteer Firemen's Short Course. In cooperation with the Maryland State Firemen's Association a short course is held annually at College Park for volunteer firemen throughout the State. This four-day course is designed to bring to firemen the newest developments in fire prevention, control and extinguishment, as well as information on inspection, arson investigation and equipment maintenance.

Information regarding fire service extension courses may be found under "Fire Service Extension Department."

Additional information regarding engineering short courses may be obtained from Dean S. S. Steinberg, College of Engineering.

FIRE SERVICE EXTENSION DEPARTMENT

The Fire Service Extension Department is organized under the College of Engineering in cooperation with the State Department of Vocational Education, and operates with both Federal and State funds. The Department provides in-service training for firemen with classes conducted throughout the State by three regional instructors and about 50 local instructors. Basic training of 75 clock hours is given in the fundamentals of firemanship, as well as an advanced course of 69 clock hours, covering the technical field of fire prevention, control and extinguishment. A training course of 45 clock hours for industrial plant fire brigades is also available. Firemen who have completed the prescribed training courses have been given preferential rating in positions in the military and naval fire fighting forces.

To meet the demands of the national emergency, the Department has expanded its activities to the training of auxiliary fire forces and rescue units in defense duties. There is also available a comprehensive training course of 24 clock hours in connection with incendiaries, war gases, infernal machines, sabotage and fire fighting as applied to military explosives and ammunition, that is available for all civilian defense groups.

The Department also serves in an advisory capacity to the State Fire Marshal and municipal authorities in matters of fire prevention, fire protection engineering, and fire safety regulations.

Additional information may be obtained from Chief J. W. Just, Director, Fire Service Extension Department, University of Maryland, College Park, Maryland.

ENGINEERING EXPERIMENT STATION

WILBERT J. HUFF, *Director.*

The Engineering Experiment Station carries on cooperative investigations with industries of Maryland and Departments of the State and Federal Governments. A diversity of engineering training, experience, and equipment represented by the staff and laboratories of the College of Engineering is thus made available for the problems under inquiry.

Among the researches that have been conducted are studies on (1) streamlined steel tubes under loading conditions; (2) high speed wings for airplanes; (3) eccentric rivet groups; (4)D tube sections under various loading conditions; (5) expansion joints for concrete roads; (6) the design of concrete culverts; (7) the conversion of petroleum products to aromatic hydrocarbons; (8) sabotage by explosives; (9) magnetic properties of special alloys. Recently completed reports have involved topics such as (a) the action of manufactured gas on ceramic ware, (b) the fluid characteristics of betonite suspensions, (c) the ferro-magnetic properties of hematite, (d) the separation and estimation of the four general classes of hydrocarbons occurring in the gasoline range of petroleum.

Dormitory Group

COLLEGE OF HOME ECONOMICS

M. Marie Mount, *Dean*

Greeba Hofstetter, *Secretary*

The College of Home Economics serves Maryland and the surrounding area with its educational program for young women. This program combines good personal development with education for homemaking and for a livelihood. Information on better health principles, good study habits, efficient use of time, good grooming, becoming dress and proper adjustment to new situations constitute the student's program for self-development.

In the professional phases of her program, the student consults with the faculty member assigned as her adviser and with women well known in home economics who aid in choosing the particular curriculum in which she expects to specialize.

The student is urged to acquire practical experience during vacations in the actual management of her family's home for a period of time and in some professional phase of home economics. Students preparing to teach, gain experience on playgrounds in caring for children and in executing home projects. Commercial firms and institutions provide opportunities for other types of experience.

Organization

For administrative purposes the College of Home Economics is organized into the Departments of Textiles and Clothing, Practical Art, Home and Institution Management, and Foods and Nutrition.

Facilities

The home of the College of Home Economics, following campus tradition, is a new colonial brick building planned and built to present the best equipment and facilities for education in home economics. A home management house is maintained on the campus for experience in homemaking.

Located, as the campus is, between two large cities, unusual opportunities are provided for both faculty and students. In addition to the University's excellent general and specialized libraries, Baltimore and Washington furnish the added library facilities so essential to scientific research and creative work in the arts. The art galleries and museums with their priceless exhibits, the government bureaus and city institutions, stimulate study and provide practical experience for the home economics student.

Professional Organizations

The Home Economics Club, in which membership is open to all home economics students, is affiliated with the American Home Economics Association.

Omicron Nu, a national home economics honor society, established Alpha Zeta chapter at the University of Maryland, November 1937. Students of high scholarship are eligible for election to membership twice during the year. Fifteen percent of the upper one-fourth of the senior class is elected in the fall and five percent of the upper one-fifth of the junior class in the spring.

Honors and Awards, Scholarships and Loan Fund

Two thousand dollars has been made available for home economics scholarships during 1946-47 by Marie Mount.

The Danforth Foundation and the Ralston Purina Company of St. Louis offer a Summer Fellowship to outstanding Juniors and to outstanding Freshmen in certain colleges and universities in the United States. The purpose of this fellowship is to bring together young women for leadership training.

Borden Home Economics Scholarship Award: Three hundred dollars is given by the Borden Company to the home economics student, who, upon entering her senior year, has completed two or more courses in foods and nutrition and has the highest scholastic standing of eligible students.

The Hecht Company of Washington has established one scholarship, worth three hundred dollars, to a resident of Maryland who has completed satisfactorily the first three years of the Practical Art curriculum in the College of Home Economics under certain provisions as to scholarship, etc.

Certain Baltimore merchants through the Retail Merchants Association of Baltimore have provided two scholarships worth three hundred dollars each for the same purpose and under similar conditions.

Omicron Nu Scholarship Award: Omicron Nu presents annually an award to the freshman in the College of Home Economics who attains the highest scholastic average during the first semester.

A loan fund established by the District of Columbia Home Economics Association is available for students majoring in home economics.

For other scholarships and awards, see pages 38-43.

Admission

The requirements for admission to the College of Home Economics are, in general, the same as for other divisions of the University (see pages 24-25).

Degrees

The degree of Bachelor of Science is conferred for the satisfactory completion, with an average of C or better, of a prescribed curriculum of 120 semester hour credits exclusive of 4 credits in hygiene and 4 in physical activities—a total of 128 credits.

The Master of Science degree is offered in Foods and Nutrition and in Home Economics Education in the College of Education.*

---

* See the Graduate School announcements.

The Student Load

The student load in the College of Home Economics varies from 14-18 credits; a student wishing to carry more than 18 credits must have demonstrated her ability to do so through satisfactory grades and must have the approval of her adviser and dean.

Curricula

At the close of the freshman year a student, who has not already done so, may elect the curriculum in general home economics or one of the following professional curricula, or a combination of curricula: home economics education, textiles and clothing, practical art, crafts, home economics extension, institution management, and foods and nutrition. A student who wishes to teach home economics may register in home economics education in the College of Home Economics or in the College of Education. (See Home Economics Education.)

The student who has not decided to specialize at the close of the freshman year may follow the general home economics curriculum until she makes a choice. Before continuing with the third year of any curriculum, the student must have attained junior standing: 64 credit hours with a C grade average.

GENERAL HOME ECONOMICS

The general home economics curriculum is planned to give a young woman a good basis for her best personal development, as has been described earlier. It provides good training for her as a future homemaker. This curriculum also forms the basis of all the professional curricula. The additional requirements of the professional curricula are listed under the description of each.*

	Semester	
Freshman Year	*I*	*II*
Eng. 1, 2—Composition and American Literature	3	3
Soc. 1—Sociology of American Life	....	3
G. & P. 1—American Government	3	....
Speech 18, 19—Introductory Speech	1	1
H. E. 1—Home Economics Lectures	1	....
Tex. 1—Textiles	....	3
Pr. Art 1—Design	3	....
P. E. 42, 44—Hygiene I, II	2	2
Physical Activities	1	1
**Math. 0—Basic Mathematics or	....	0
Elective	3	3
Total	17	13-16

---

* In order to meet the particular need of a student certain adjustments in these requirements may be made with the approval of the student's adviser and dean.

** An examination in Mathematics will be given to freshmen during the first semester; those who pass will not be required to take Math. 0.

	—*Semester*—	
Sophomore Year	*I*	*II*
Eng. 3, 4—Composition and World Literature or	3	3
Eng. 5, 6—Compositions and English Literature	(3)	(3)
Chem. 11, 13—General Chemistry	3	3
Foods 2, 3—Foods	3	3
Econ. 37—Fundamentals of Economics	3	....
Psych. 1—Introduction to Psychology	....	3
Clo. 20 A or B—Clothing Construction	3	....
Pr. Art 20—Costume Design	....	3
Physical Activities	1	1
Total	16	16

Junior Year		
Home Mgt. 150, 151—Management of the Home	3	3
Nut. 110—Nutrition or	3	....
Nut. 10—Elements of Nutrition	(3)	....
Pr. Art. 140, 141—Interior Design	3	3
Clo. 120—Draping	....	3
Foods 101—Meal Service	....	2
Foods 100—Food Economics	2	....
Physics 1, 2—Elements of Physics	3	3
Elective	3	3
Total	17	17

Senior Year		
H. 5, 6—History of American Civilization	3	3
Home Mgt. 152—Practice in Management of the Home	....	3
H. E. Ed. 110—Child Development	3	....
Bact. 51—Household Bacteriology	....	3
Zool. 16—Human Physiology	4	....
Electives	6	5
Total	15	14

Textiles and Clothing

The curricula below have been planned to meet the demand for technically trained college women in the textile, clothing and fashion industries.

Specialization in textiles or clothing begins in the junior year.

Students who prefer a combination curriculum may satisfy the requirements for such a curriculum by taking all the courses common to both the textile and clothing curricula and a minimum of five additional credits in each field.

	Semester	
Sophomore Year	*I*	*II*
Eng. 3, 4—Composition and World Literature or	3	3
Eng. 5, 6—Composition and English Literature	(3)	(3)
Chem. 11, 13—General Chemistry	3	3
Foods 1—Introductory Foods or	....	3
Foods 2, 3—Foods	(3)	(3)
Econ. 37—Fundamentals of Economics	3	....
Psych. 1—Introduction to Psychology	....	3
Pr. Art 20—Costume Design	....	3
Clo. 20 A or B—Clothing Construction	3	....
Clo. 21—Personal Problems in Clothing	2	....
Physical Activities	1	1
Elective	1	....
Total	16	16

Textiles

Junior Year	*I*	*II*
Home Mgt. 150, 151—Management of the Home	3	3
Foods 101—Meal Service	....	2
Nut. 10—Elements of Nutrition or	3	....
Nut. 110—Nutrition	(3)	....
Pr. Art 140—Interior Design	3	....
Physics 1, 2—Elements of Physics	3	3
Chem.—Organic Chemistry	4	....
Math. 10—Algebra	....	3
Tex. 100—Advanced Textiles	....	3
Electives	....	2
Total	16	16

Senior Year		
H. 5, 6—History of American Civilization	3	3
Bact. 51—Household Bacteriology	3	....
Tex. 101—Problems in Textiles	3	....
Chem. 41—Chemistry of Textiles	....	4
Home Mgt. 152—Practice in Management of the Home	3	....
H. E. Ed. 110—Child Development	....	3
Math. 13—Elementary Mathematical Statistics	....	3
Speech 101—Introduction to Radio	3	....
Electives	1	2
Total	16	15

Clothing

Junior Year	*Semester* I	*Semester* II
Home Mgt. 150, 151—Management of the Home	3	3
Nut. 10—Elements of Nutrition	3	....
Pr. Art 140, 141—Interior Design	3	3
Clo. 120—Draping	3	....
Clo. 121—Pattern Design	....	2
Science	3	3
Foods 101—Meal Service	....	2
Electives	2	2
Total	17	15

Senior Year	I	II
H. 5, 6—History of American Civilization	3	3
Bact. 51—Household Bacteriology	3	....
H. E. Ed. 110—Child Development	....	3
Tex. 103—Consumer Problems in Textiles	....	3
Home Mgt. 152—Practice in Management of the Home	3	....
Clo. 122—Tailoring	2	....
Clo. 124—Projects and Readings in Textiles and Clothing	....	2
Speech 101—Introduction to Radio	3	....
Psychology	....	3
Electives	1	2
Total	15	16

Art Education, see page 139.

Practical Art (For Women)

This curriculum permits a choice of three fields of concentration: advertising, interior design, costume design. Emphasis is given to the selection of house furnishings and wearing apparel with relation to personality. Positions available to graduates begin with advertising, selling, display, comparison shopping, textile analysis, and radio work; they develop into advanced positions in these fields or in departmental buying, department managing, style coordination, personality consulting, designing, store training and personnel work.

**Freshman Year*

Sophomore Year	Semester I	Semester II
Eng. 3, 4—Composition and World Literature or	3	3
Eng. 5, 6—Composition and English Literature	(3)	(3)
Chem. 11, 13—General Chemistry	3	3
Foods 1—Introductory Foods	3	....
Econ. 37—Fundamentals of Economics	3	....
Psych. 1—Introduction to Psychology	....	3
Pr. Art 20—Costume Design	3	....
Clo. 20—Clothing Construction	....	3
Pr. Art 30—Typography and Lettering	....	3
Physical Activities	1	1
Electives	2	2
Total	18	18

Junior Year	I	II
Home Mgt. 150, 151—Management of the Home	3	3
Foods 101—Meal Service	2	....
Nut. 10—Elements of Nutrition	....	3
Pr. Art 140, 141—Interior Design	3	3
Econ. 150—Marketing Principles and Organization	3	....
B. A. 154—Retail Store Management and Merchandising	....	3
Pr. Art 0—Professional Lectures	....	0
**French, Spanish, German or Elective	3	3
Electives	2	2
Total	16	17

Senior Year	I	II
H. 5, 6—History of American Civilization	3	3
Home Mgt. 152—Practice in Management of the Home	(3)	3
Pr. Art 136—Merchandise Display	2	(2)
Pr. Art 132—Advertising Layout	2	....
H. E. Ed. 110—Child Development	....	3
Tex. 105—Consumer Problems in Textiles	....	3
Speech 115—Radio in Retailing	3	....
Pr. Art 120—Costume Illustration or	(2)	(2)
Pr. Art 142—Advanced Interior Design	2	2
Electives	4	....
Total	16	14

---

* Pr. Art 2—Survey of Art History (2) is a required subject which should be taken the fall term of the Freshman Year.

** One year of French, Spanish, or German is required of every student who has not completed two years of one of these languages, with a grade of C or better, in high school.

Note: Students, who are majoring in Costume Design, are advised to take Pr. Art 21 Action Drawing (2), Clo. 120 Draping (3), Clo. 121 Pattern Design (2).

Students who are interested in Merchandising, are advised to take Pr. Art 198 Store Experience (3) the summer following their junior year; they must make their arrangements with the Head of the Department of Practical Art during the spring semester of the junior year.

Practical Art (For Men)

Requirements are the same as for the curriculum in Practical Art, as set up for women, with the following exceptions:

Omissions—H. E. 1; Pr. Art 20; Clo. 20; Foods 1, 101; Home Mgt. 150, 151, 152; Tex. 105; H. E. Ed. 110.

Additions—H. E. 2; M. I. 1, 2, 3, 4; also, 15 hours in art and merchandising courses to be selected in consultation with the Head of the Department of Practical Art.

Crafts (For Women)

This curriculum serves persons who are interested in crafts for recreational, therapeutic, and professional purposes. Emphasis is given to the joy of creation through crafts. Positions available to graduates include industrial designing, occupational therapy, instruction at recreation centers, and classroom teaching of crafts.

**Freshman Year*

Sophomore Year

	Semester I	*Semester* II
Eng. 3, 4—Composition and World Literature or	3	3
Eng. 5, 6—Composition and English Literature	(3)	(3)
Chem. 11, 13—General Chemistry	3	3
Foods 1—Introductory Foods	3	....
Econ. 37—Fundamentals of Economics	3	....
Psych. 1—Introduction to Psychology	....	3
Pr. Art 20—Costume Design	3	....
Clo. 20—Clothing Construction	....	3
Cr. 2—Simple Crafts	....	2
Pr. Art 3—Creative Art Inspired by Primitive Art	2	....
Pr. Art 4—Three Dimensional Design	....	2
Physical Activities	1	1
Total	18	17

Junior Year

	I	II
Home Mgt. 150, 151—Management of the Home	3	3
Foods 101—Meal Service	2	....
Nut. 10—Elements of Nutrition	....	3
Pr. Art 140, 141—Interior Design	3	3
Cr. 20, 21—Ceramics	2	2
Cr. 30, 31—Metalry	2	2
Pr. Art 0—Professional Lectures	....	0
**French, Spanish, German, or Elective	3	3
Electives	2	2
Total	17	18

---

* Pr. Art 2 Survey of Art History is a required subject which should be taken the fall term of the Freshman Year.

** One year French, Spanish, or German is required of every student who has not completed two years of one of these languages, with a grade of C or better, in high school.

Note: Students, who expect to work in occupational therapy, are advised to elect courses in physiology, kinesiology and mental hygiene.

Senior Year	*Semester* I	II
H. 5. 6—History of American Civilization	3	(3)
Home Mgt. 152—Practice in Management of the Home	3	(3)
H. E. Ed. 110—Child Development	....	3
Cr. 40, 41—Weaving	2	2
Advanced Crafts	4	4
Cr. 198—Crafts in Therapy	....	2
Electives	3	....
Total	15	14

Crafts (For Men)

Requirements are the same as for the Curriculum in Crafts, as set up for women, with the following exceptions:

Omissions—H. E. 1; Pr. Art 20; Clo. 20; Foods 1, 101; Home Mgt. 150, 151, 152; H. E. Ed. 110.

Additions—H. E. 2; M. I. 1, 2, 3, 4; also 15 hours in art courses to be selected in consultation with the Head of the Department of Practical Art.

Home Economics Extension*

This curriculum outlines the training necessary for the young woman who wishes to work with rural people through extension service or other agencies interested in the educational and social problems of rural living.

Sophomore Year	*Semester* I	II
Eng. 3, 4—Composition and World Literature or	3	3
Eng. 5, 6—Composition and English Literature	(3)	(3)
Chem. 11, 13—General Chemistry	3	3
Foods 2, 3—Foods	3	3
Econ. 37—Fundamentals of Economics	3	....
Psych. 80—Educational Psychology	....	3
Pr. Art 20—Costume Design	....	3
Clo. 20 A or B—Clothing Construction	3	....
Physical Activities	1	1
Total	16	16

Junior Year	I	II
Home Mgt. 150, 151—Management of the Home	3	3
Foods 100—Food Economics	2	....
Nut. 110—Nutrition	3	....
Chem.—Elements of Organic Chemistry	4	....
Foods 103—Demonstrations	2	....
Physics 1, 2—Elements of Physics	3	3
Ed. 190—Principles of Education	....	2
Clo. 120—Draping	....	3
R. Ed. 114—Rural Life Education	....	3
Electives	....	2
Total	17	16

---

* Practice work in the field of Home Economics Extension or in social case work is encouraged for all students majoring in this curriculum. Such experience should be gained before the completion of the senior year.

Senior Year	*Semester* I	*Semester* II
H. 5, 6—History of American Civilization	3	3
Home Mgt. 152—Practice in Management of the Home	....	3
Zool. 16—Human Physiology	4	....
Bact. 51—Household Bacteriology	....	3
H. E. Ed. 110—Child Development	3	....
Foods 102—Experimental Foods	3	....
H. E. Ext. 100—Methods in Home Economics Extension	....	3
Pr. Art 140, 141—Interior Design	3	3
Total	16	15

Institution Management

This curriculum provides training for those interested in housing and the food service administration for large groups of persons. The work is of two general types: (1) food service in such institutions as hospitals, schools and colleges; in the public schools where a midday meal is served; and in commercial organizations: restaurants, inns, hotels and industrial cafeterias; (2) housekeeping in inns and hotels; and in hospitals, schools and colleges.

The preparation for a hospital dietitian requires one year of graduate training in a hospital offering a course approved by the American Dietetic Association. This curriculum meets the academic requirements for entrance to such a course.

Students following this curriculum are required to have, before the senior year, field experience in food service. This experience must be satisfactory in length of time, type of work experienced and in quality.

A student planning to do institutional work other than hospital dietetics is not required to take Principles of Education and Diet in Disease.

Sophomore Year	*Semester* I	*Semester* II
Eng. 3, 4—Composition and World Literature or	3	3
Eng. 5, 6—Composition and English Literature	(3)	(3)
Chem. 11, 13—General Chemistry	3	3
Foods 2, 3—Foods	3	3
Econ. 37—Fundamentals of Economics	3	....
Psych. 80—Educational Psychology	....	3
Physical Activities	1	1
*Electives	3	3
Total	16	16

---

* One of the following selection of courses is to be taken in place of a freshman or sophomore elective: Pr. Art 20, Costume Design (3), Clo. 20 A or B, Clothing Construction (3), Clo. 21, Personal Clothing Problems (2).

Junior Year	*Semester* I	II
Home Mgt. 150, 151—Management of the Home	3	3
Nut. 110—Nutrition	3	....
Nut. 112—Dietetics	....	3
Chem.—Organic Chemistry	4	....
Chem. 81, 82—General Bio-Chemistry	....	4
Inst. Mgt. 160—Institution Organization and Management	3	....
Inst. Mgt. 161—Institution Purchasing and Accounting	....	3
Ed. 190—Principles of Education	....	2
Phys. 1—Elements of Physics	3	....
Elective	....	1
Total	16	16

Senior Year		
H. 5, 6—History of American Civilization	3	3
Home Mgt. 152—Practice in Management of the Home	3	....
Pr. Art 140—Interior Design	3	....
Zool. 16—Human Physiology	4	....
Bact. 51—Household Bacteriology	....	3
H. E. Ed. 110—Child Development	....	3
Foods 102—Experimental Foods	3	....
Inst. Mgt. 162—Institution Foods	....	3
Nut. 113—Diet in Disease	....	2
Inst. Mgt. 164—Advanced Institution Management	....	2
Total	16	16

Foods and Nutrition

The purpose of the Foods and Nutrition Curriculum is two-fold—to provide an education in this field for the individual's personal use or for use in promoting good health and happiness in the family group and to provide training for professional use: in teaching, research, editorial or promotional work.

Sophomore Year	*Semester* I	II
Eng. 3, 4—Composition and Readings in World Literature or	3	3
Eng. 5, 6—Composition and Readings, mainly in English Literature	(3)	(3)
Chem. 11, 13—General Chemistry	3	3
Foods 2, 3—Foods	3	3
Econ. 37—Fundamentals of Economics	3	....
Psych. 1—Introduction to Psychology	....	3
Pr. Art 20—Costume Design	....	3
Clo. 20—Clothing Construction	3	....
Physical Activities	1	1
Total	16	16

Junior Year

	Semester I	Semester II
Home Mgt. 150, 151—Management of the Home	3	3
Foods 100—Food Economics	2	....
Foods 101—Meal Service	....	2
Nut. 110—Nutrition	3	....
Nut. 112—Dietetics	....	3
Chem.—Elements of Organic Chemistry	4	....
Chem. 81, 82—General Bio-Chemistry	....	4
Physics 1, 2—Elements of Physics	3	3
Total	15	15

Senior Year

	Semester I	Semester II
H. 5, 6—History of American Civilization	3	3
Home Mgt. 152—Practice in Management of the Home	....	3
Pr. Art 140, 141—Interior Design	3	3
Zool. 16—Human Physiology	4	....
Bact. 51—Household Bacteriology	....	3
H. E. Ed. 110—Child Development	3	....
Nut. 111—Child Nutrition	....	2
Foods 102—Experimental Foods	3	....
Foods 103—Demonstrations	2	....
Foods 104—Advanced Foods	....	2
Total	18	16

THE COLLEGE OF MILITARY SCIENCE, PHYSICAL EDUCATION, AND RECREATION

COL. HARLAND C. GRISWOLD, U. S. A., *Acting Dean*
MRS. ANN FLYNN, *Secretary*

The College of Military Science, Physical Education, and Recreation has been established to provide leaders for the Nation in the field of Military Science and for the Nation and State in Physical Education and Recreation programs. The college will give training and education to prepare men for the military services. The college also will fulfill the need for teachers and for leaders in recreation programs such as camping, the arts, dramatics, pageants, and so forth. The work in the college is so organized that majors in four different fields will be given; namely, Military Science, Physical Education, Recreation, and Health Education. Students with majors in other colleges may elect to take minors in either of the above-mentioned fields.

Required physical training for all freshmen and sophomore students will be closely coordinated and be a part of the general military work. One of the great lessons of the war was the discovery that so many young men were not physically qualified for military service. Physical examinations will be given all students and, in case of physical disabilities, corrective work will be assigned.

Military Science and Tactics

Instruction in military science and tactics has been an important phase of the College Park division of the University of Maryland since 1856. In 1864 the General Assembly of Maryland accepted the provision of the Act of Congress of 1862 whereby public lands were donated to the States providing colleges in which a course of military training was maintained. Until 1916 the institution was a military school. After the first World War the military training was reorganized and given as specified in the Acts of Congress of 1916 and 1920, as amended, which are commonly known as the National Defense Acts. Under these laws the Reserve Officer Training Corps is organized to provide basic training and to offer advanced training leading to a commission in the Officer Reserve Corps on a selective basis. All male students, unless specifically exempted, under University rules are required to take basic military training for a period of two years. This is a prerequisite for graduation and must be taken by all eligible students in their first two years of attendance whether they intend to graduate or not. Students of the University, regardless of the college in which registered, who successfully complete the basic training may be considered as candidates for the advanced R. O. T. C. course.

Students taking a major or a minor in military work will be especially qualified to be commissioned officers for the Reserve Corps, National Guard, Marine Corps, Marine Corps Reserve, or the Regular Army. Appointments, of course, to such commissions are subject to Federal or State government regulations, laws, and military directives. During the Emergency the Advanced Course was suspended, but resumption has been authorized and activated for the fall semester. The hundreds of Maryland graduates who received their commissions through this unit were found ready and capable when the national crisis arose, and they have achieved an inspiring and enviable record of which the State may well be proud.

Staff

COLONEL HARLAND C. GRISWOLD, Professor, Military Science and Tactics, Commandant.

LT. COLONEL EDWARD J. MINION, Assistant Professor, Military Science and Tactics.

MAJOR J. NEWTON COX, Assistant Professor, Military Science and Tactics.

CAPTAIN GERMAN W. RICE (Retired), Military Property Custodian.

MR. HAROLD C. YEAGER, Band Director.

MRS. ANN FLYNN, Secretary to Commandant.

MASTER SERGEANT CHARLES H. DODSON, Instructor.

TECHNICAL SERGEANT FAY J. NORRIS, Instructor.

Two additional officers and one additional non-commissioned officer, as yet not selected, will be added to the staff prior to the opening of the fall term of 1946.

Army personnel, approved by the President of the University, are detailed by the War Department to administer the course. They serve under appointment by the University, the senior as the Professor of Military Science and Tactics, and the others as Assistant Professors of Military Science and Tactics. Selected non-commissioned officers of the Army are also detailed by the War Department and serve as instructors.

An Infantry Unit and a Signal Corps Unit, the latter open only to students registered for mechanical or electrical engineering, is authorized. The required course of two years is known as Basic I and II Branch Immaterial.

This is a thorough, comprehensive course designed to prepare men for any branch of the service.

The necessary training equipment including uniforms, weapons, and technical material, is loaned to the University by the War Department. Students in the basic courses are loaned uniforms without cost, but must purchase their own shoes of a type specified by the Military Department.

The New Armory located East of the Administration Building has been declared by a War Department inspector to be one of the finest buildings used for Military instruction in the country. It contains clothing and ordnance storerooms, class rooms, offices, projection room, a ten firing point small bore range, and a drill floor 240 feet long by 120 feet wide. Drill field, parade grounds, obstacle course, and outdoor range are nearby.

Advanced Course

The primary object of the Advanced Course is to provide military instruction and systematic training to selected eligible students through the agency of educational institutions, to the end that they may qualify as reserve officers in the Military forces of the United States. It is intended to attain this objective in accordance with the terms of the contract during the time the students are pursuing their academic studies at the University.

A student prior to enrollment in the course must have satisfactorily completed the basic course or have been honorably discharged, or transferred to the Enlisted Reserve Corps and relieved from active duty and had one year of such active duty. The student must have indicated in writing his desire to undertake the course. Selection of students in the advanced course will be made by the President of the University and the Processor of Military Science and Tactics, as provided in section 47c, National Defense Act. No applicant will be admitted to the advanced course who is less than nineteen or more than twenty-six years of age at the time of admission or who is not able to pass physical standards set forth in AR 40-105 or 40-110.

Program of Instruction

For first and second years, basic course, and the advanced course the instruction will consist of five hours per week, of which at least three hours are utilized for theoretical instruction.

Uniforms

All members must appear in proper uniforms at all Military drill formations and at such other times as the Commandant may designate.

Uniforms for students in the basic course are furnished by the Government. The uniforms are the regulation uniforms of the United States Army, with certain distinguishing features. Such uniforms must be kept in good condition by the students. They remain the property of the Army, and though intended primarily for use in connection with military instruction they may be worn at other times unless the Commandant instructs otherwise. The uniforms will not be worn in part nor used while the wearer is engaged in athletic sports. A basic course uniform will be returned to the Military Department at the end of the year; or before, if a student severs his connection with the Department.

The Advanced Course students will wear an officer-type uniform, purchased on a Government allowance.

Commutation

All members of the Advanced Course will receive a monetary allowance in lieu of subsistence, equivalent to the current value of the garrison ration, to be paid monthly during the periods of enrollment in the Advanced Course less the period of the Advanced Camp of six weeks. During this Camp the student will receive the pay of the seventh enlisted grade and travel pay. The total periods of receiving commutation will not exceed two calendar years. This allowance will be paid in addition to benefits authorized by the GI Bill of Rights.

Credits

Military instruction at this Institution is on a par with other university work, and the requirements of this department as to proficiency are the same as those of other departments.

Students who have received Military Training at any educational institution under the direction of army officers detailed as Professor of Military Science and Tactics, may receive such credit as the Commandant and the President may jointly determine.

University and R. O. T. C. Bands

The University of Maryland Band and the R. O. T. C. Band both function under the Military Department and their instruction is conducted by an experienced band master.

The R. O. T. C. Band is composed largely of R. O. T. C. students, but all students are welcome to participate. The R. O. T. C. Band practices at the drill period and plays at military formations.

The University Band practices at a designated time determined by the organization and plays at athletic events and special University occasions. Instruments and uniforms are furnished by the Federal and State governments. Membership in the University Band is open to all students, men or women. One credit per semester, not to exceed a total of eight credits, may be earned by participation in this activity.

The Varsity Rifle Team

The Varsity Rifle Team is under the supervision of the Military Department. Rifle competition at the University of Maryland is rated as a major sport activity, and the varsity letters and sweaters are awarded each year to team members. The rifle teams representing this institution have a high national standing as they have consistently placed in the top brackets in the National Intercollegiate Rifle Match. They have been consistent winners in the William Randolph Hearst Trophy Match and the Third Service Command R.O.T.C. Match as well as winning a very high percentage of the regular schedule of postal and shoulder patches. Rifle and ammunition are furnished by the State and Federal Governments and the rifle range in the New Armory used by the team has been pronounced by officials of the National Rifle Association to be one of the finest in the country.

In peace time a Varsity Team and a Freshman Team are placed in competition, with members of the latter team being awarded class numerals. During the present emergency freshmen are eligible for the varsity team and no Freshman Team is maintained.

Physical Education

The demand for teachers in the field of physical education is far greater than the supply. The professional work in physical education is intended to develop leaders to teach and to supervise such work in the public school system and in private schools and colleges. It is also intended to provide special training in the field of industrial education; to provide leaders for the large programs now being formulated in the big industrial plants.

Health

The demand for teachers in Hygiene Instruction, especially in large cities, has existed for some time. To meet this situation, a major course in health instruction has been arranged. This course will prepare students for teachers and supervisors in personal and community hygiene.

Recreation

Throughout the country there is a great demand for men and women trained in the field of recreation. This involves not only recreation from the standpoint of play programs, but also for management of camps, development of the dramatic arts, community recreation problems, writing and organization of pageants, numerous other activities intended to relieve the tedium of life for large groups of people, and the study of personnel problems, and all those factors that go to make up the sociology of American life.

Facilities

The University of Maryland has several athletic fields, has a large armory which is also used for recreation purposes, has a gymnasium for boys and a gymnasium for girls, and also a large building in which athletic events are held. The last Legislature authorized the construction of a large swimming pool, which will be built as soon as materials become available. The University has an excellent armory and other facilities for military training, including one of the best of two or three indoor rifle ranges in America.

The weakening influence of our modern machine civilization makes essential a progressive course, especially designed to condition and develop the human body to the point where it can retain normal responses to stimuli in the face of fatigue and exhaustion and continue to function effectively in the routine and emergency tasks of life.

In addition to the required activities, sophomore students may elect a considerable number of individual sports, such as fencing, boxing, wrestling, horseshoes, ping pong, bag punching, badminton, shuffleboard, and the like.

An adequate program of intramural sports is conducted also. Touch football and soccer in the fall, basketball and volleyball in the winter, baseball and track in the spring, are the chief activities in this program. Plaques, medals, and other appropriate awards in all tournaments of the program are provided for the winning teams and individual members.

Every afternoon of the school session the facilities of the Physical Education Department are thrown open to all students for free unorganized recreation. Touch football, soccer, basketball, basket shooting, apparatus work, fencing, boxing, wrestling, bag punching, tennis, badminton, and ping pong are the most popular contests engaged in.

Degrees

The degree conferred upon students who have met the conditions described for a degree in the College of Military Science, Physical Education and Recreation is a Bachelor of Science.

COLLEGE OF MILITARY SCIENCE CURRICULUM

	Semester	
Freshman Year	*I*	*II*
Eng. 1, 2—Composition and Reading in American Literature	3	3
Soc. 1—Sociology of American Life	....	3
G. & P. 1—American Government	3	....
Speech 1, 2—Public Speaking	2	2
Math. 10, 11—Algebra, Trigonometry, Analytic Geometry	3	3
Modern Language (one language for two years' study)	3	3
*M. I. I, 1, 2—Basic R. O. T. C.	3	3
*Physical Activities	1	1
Total	18	18
Sophomore Year		
Eng. 3, 4 or 5, 6—Composition and Reading in World Literature	3	3
Hist. 5, 6—History of American Civilization	3	3
Speech 5, 6—Advanced Public Speaking	2	2
Physics 1, 2—Elements of Physics	3	3
Dr. 4, 5—Mechanical Drawing	1	1
Modern Language	3	3
*M. I. II 1, 2—Basic R. O. T. C.	3	3
*Physical Activities	1	1
Total	19	19
Junior Year		
Speech—Military Speech and Command	2	2
Agr. Eng. 102—Gas Engines, Tractors and Automobiles	....	3
Ecom. 37—Fundamentals of Economics	3	....
Surv. 1, 2—Plane Surveying	2	2
†M. I. III, 1, 2—Advanced R. O. T. C.	3	3
Minor Sequence	6	6
Total	16	16

---

* Credit allowed for equivalent service in the Armed Forces.

Senior Year (Not available, school year 1946-47)	*Semester* I	II
G. & P. 102—International Law	....	3
M. I. 101—Military Logistics	3	....
M. I. 102—Miltary Leadership	....	3
M. I. 103—Military Policy of the United States	3	....
†M. I. IV—Advanced R. O. T. C.	3	3
Minor Sequence	6	6
Total	15	15

CURRICULUM FOR PHYSICAL EDUCATION, HEALTH EDUCATION, AND RECREATION FOR MEN

For men three curricula are offered in this department, namely, *health education, physical education* and *recreation.* The work in the freshman and sophomore years is the same in all three curricula.

The work of the first two years in the College of Physical Education, Health Education and Recreation is designed to give the student a basic general education so that he will be able to select a curriculum in which he desires to specialize in his junior year.

Freshman and Sophomore Curriculum for Men

Freshman Year	*Semester* I	II
Zool. 1—General Zoology	4	....
Bact. 1—General Bacteriology	....	4
Eng. 1, 2—Composition and American Literature	3	2
Soc. 1—Sociology of American Life	3	....
G. & P. 1—American Government	....	3
P. E. 30—History and Principles of Physical Education	3	....
Ed. 2—Intrduction to Education	....	2
Physical Activities	1	1
M. I. 1, 2—Basic R. O. T. C.	3	3
Nut. 10—Elements of Nutrition	....	3
Total	17	19

Sophomore Year	I	II
Eng. 3, 4—Composition and World Literature	3	3
H. 5, 6—History of American Civilization	3	3
Zool. 14, 15—Human Anatomy and Physiology	4	4
P. E. 40—Hygiene	3	....
Speech 4—Voice and Diction	....	3
Physical Activities	1	1
M. I. 3, 4—Basic R. O. T. C.	3	3
Total	17	17

---

† Students holding Reserve commissions may be granted partial or complete credit by examination.

Physical Education Curriculum for Men

Junior Year

Psych. 80—Educational Psychology	3	...
Health 120—Teaching Health	....	2
P. E. 181—Training and Conditioning	1	....
P. E. 45—Track	....	2
Ed. 160—Educational Sociology	2	....
Ed. 140—Curriculum, Instruction, and Observation—Physical Education	....	3
Zool. 53—Physiology of Exercise	2	....
Ed. 130—Theory of the Junior High School	....	2
P. E. 160—Introduction to Recreation	3	....
P. E. 180—Tests and Measurements in Physical Education	....	3
P. E. 60—Gymnastics	3	....
P. E. 63—Officiating	....	2
P. E. 41—Football	2	....
P. E. 57—Combative Sports Skills	....	1
Electives	1	2
Total	17	17

Senior Year

Ed. 143—Methods and Practice Teaching	5	....
P. E. 140—Therapeutics	....	3
P. E. 70—First Aid	2	....
P. E. 171—Organization and Administration of Physical Education	....	3
Ed. 160—Guidance in Secondary Schools	2	....
P. E. 100, 110—Kinesiology	2	2
P. E. 47—Baseball	....	2
P. E. 43—Basketball	2	....
P. E. 53a—Assisting in Intramurals	....	1
P. E. 51—Minor Sports Skills	1	....
Rec. 120—Camping, Administration and Leadership	....	3
P. E. 53—Organization of Intramurals	....	1
Electives	3	2
Total	17	17

Students who carry a major in another teaching field and who wish to prepare to coach interscholastic athletics may develop a minor in physical education by taking 30 semester hours including the following courses:

P. E. 30—History and Principles of Physical Education	3
P. E. 40—Hygiene	3
P. E. 41, 43, 45, 47—Varsity Sports	8
P. E. 181—Training and Conditioning	1
P. E. 63, 63—Officiating	2
P. E. 120—Mental Hygiene in Physical Education	2
P. E. 171—Organization and Administration	3
P. E. 53—Organization of Intramurals	1

Health Education Curriculum for Men

Junior Year

	—Semester—	
	I	II
Bact. 101—Pathogenic Bacteriology	4	....
Science Elective	....	3
Psych. 80—Educational Psychology	3	....
Hea. 120—Teaching Health	....	2
P. E. 100, 110—Kinesiology	2	2
Hea. 110—Health Service and Health Supervision	3	....
Psych. 17—Mental Hygiene	....	3
P. E. 51—Minor Sports Skills	1	....
H. E. Ed. 110—Child Development	....	3
P. E. 53—Organization of Intramurals	....	1
Ed. 150—Educational Measurements	2	....
Electives	2	3
Total	17	17

Senior Year

Ed. 147—Audio-Visual Education	2	....
P. E. 50—Safety Education	....	3
P. E. 70—First Aid	2	....
Hea. 130—Organization and Administration of Health Education	....	3
Nut. 113—Diet and Disease	2	....
P. E. 140—Therapeutics	....	3
Zool. 53—Physiology of Exercise	2	....
Bact. 108—Epidemiology and Public Health	....	3
Ed. 143—Methods and Practice Teaching in Health Education	5	....
Ed. 130—Theory of Junior High School	....	2
P. E. 150—Recreational Dance	2	....
P. E. 181—Training and Conditioning	1	....
Electives	1	3
Total	17	17

Recreation Curriculum for Men

Junior Year

P. E. 160—Introduction to Recreation	3	....
Pr. Art. 2—Survey Art History	....	2
Psych. 80—Educational Psychology	3	....
Rec. 110—Nature Lore	....	3
Mus. 1—Music Appreciation	3	....
Soc. 81—Introduction to Social Work	....	3
Soc. 126—Juvenile Delinquency	3	....
Ed. 160—Educational Sociology	....	2
P. E. 41—Football	2	....
Rec. 120—Camp Administration and Leadership	....	3
P. E. 150—Recreational Dance	2	....
P. E. 45—Track	....	2
P. E. 170—Recreational Dance	....	2
Electives	1	....
Total	17	17

Senior Year	*Semester — I*	*Semester — II*
Ed. 147—Audio-Visual Education	2	....
Rec. 100—Co-recreational Program	....	3
P. E. 70—First Aid	2	....
Ed. 152—The Adolescent: Characteristics and Problems	....	3
Rec. 130—Observation and Service in Recreation	5	....
Rec. 140—Organization and Administration of Recreation	....	2
P. E. 43—Basketball	2	....
P. E. 47—Baseball	....	2
P. E. 51—Minor Sports Skills	1	....
P. E. 63—Officiating	....	2
P. E. 53—Organization of Intramurals	1	....
Cr. 3—Simple Crafts	....	2
Electives	4	3
Total	17	17

PHYSICAL EDUCATION, HEALTH EDUCATION AND RECREATION FOR WOMEN

The Department of Physical Education, Health Education and Recreation for Women has excellent facilities for conducting a full activities program. Recreational games; team sports, including hockey, soccer, speedball, basketball, volley ball, softball; individual sports, consisting of tennis, badminton, fencing, golf, archery, and table tennis, are offered. Opportunity is given for various types of dancing, including modern, square, folk, and ballroom. The proximity of the University to Washington and Baltimore provides excellent opportunity for groups to attend professional programs in dance.

The Women's Recreation Association under the supervision of the Department of Physical Education for Women, sponsors and conducts intramural tournaments in hockey, bowling, basketball, volley ball, badminton, and tennis, and arranges sports days with neighboring colleges.

CURRICULUM FOR PHYSICAL EDUCATION, HEALTH EDUCATION, AND RECREATION FOR WOMEN

The work of the first two years in the College of Physical Education, Health Education and Recreation is designed to give the student a basic general education so that she will be able to select a curriculum in which she desires to specialize in her junior year.

For women four curricula are offered, namely, *health education, physical education, recreation*, and *pre-physical therapy*, in all of which the freshman and sophomore work is identical.

Freshman-Sophomore Curriculum for Women

Freshman Year

	Semester	
	I	*II*
Zool. 1—General Zoology	4	....
Eng. 1, 2—Composiiton and American Literature	3	3
Soc. 1—Sociology of American Life	3	....
Bact. 1—General Bacteriology	....	4
G. & P. 1—American Government	....	3
Ed. 2—Introduction to Education	....	2
Nut. 10—Elements of Nutrition	....	3
P. E. 30—History and Principles of Physical Education	3	....
P. E. 62, 64—Techniques of Sport Skills	2	2
P. E. 52, 54—Dance Techniques	2	2
Total	17	19

Sophomore Year

Eng. 3, 4—Composition and World Literature	3	3
H. 5, 6—History of American Civilization	3	3
Zool. 14, 15—Human Anatomy and Physiology	4	4
Speech 4—Voice and Diction	....	3
P. E. 40—Hygiene	3	....
P. E. 66, 68—Techniques of Sport Skills	2	2
P. E. 56, 58—Dance Techniques	2	2
Total	17	17

Physical Education Curriculum for Women

Junior Year

Psych. 80—Educational Psychology	3	....
Ed. 160—Educational Sociology	2	....
Zool. 53—Physiology of Exercise	2	....
Hea. 120—Teaching Health	....	2
Ed. 140—Curriculum, Instruction, and Observation—Physical Education	....	3
Ed. 130—Theory of Junior School	....	2
P. E. 160—Introduction to Recreation	3	....
P. E. 102, 104—Techniques of Sport Skills	2	2
P. E. 150, 170—Recreational Dance	2	2
P. E. 180—Tests and Measurements in Physical Education	....	3
P. E. 100, 110—Kinesiology	2	2
Electives	1	1
Total	17	17

Senior Year

Ed. 143—Methods and Practice of Teaching	5	....
Ed. 160—Guidance in Secondary Schools	2	....
Rec. 120—Camp Administration and Leadership	....	3
P. E. 70—First Aid	2	....
P. E. 140—Therapeutics	....	3
P. E. 124, 126—Coaching and Officiating	2	2
P. E. 106, 108—Techniques of Sport Skills	2	2
P. E. 116—Organization and Administration of Physical Education	....	3
Electives	1	1
Total	17	17

Health Education Curriculum for Women

Junior Year

	Semester	
	I	II
Science Elective	....	3
Psych. 80—Education Psychology	3	....
Hea. 110—Health Service and Health Supervision in Schools	3	....
Hea. 112—Home Nursing	2	....
Ed. 150—Educational Measurement	2	....
Bact. 101—Pathogenic Bacteriology	4	....
Hea. 120—Teaching Health	....	2
Psych. 17—Mental Hygiene	....	3
H. E. Ed. 110—Child Development	....	3
P. E. 100, 110—Kinesiology	2	2
P. E. 102, 104—Techniques of Sport Skills	2	2
Electives	....	1
Total	18	16

Senior Year

	I	II
Ed. 147—Audio-Visual Education	2	....
Nut. 113—Diet and Disease	2	....
Zool. 53—Physiology of Exercise	2	....
Ed. 143—Methods and Practice of Teaching in Health Education	5	....
Hea. 130—Organization and Administration of Health Education	....	3
Bact. 108—Epidemiology and Public Health	....	3
Ed. 130—Theory of Junior High School	....	2
P. E. 70—First Aid	2	....
P. E. 150—Recreational Dance	2	....
P. E. 50—Safety Education	....	3
P. E. 140—Therapeutics	....	3
Electives	2	3
Total	17	17

Recreation Curriculum for Women

Junior Year

	I	II
Psych. 80—Education Psychology	3	....
Mus. 1—Music Appreciation	3	....
Soc. 126—Juvenile Delinquency	3	....
Pr. Art. 2—Survey of Art History	....	2
Rec. 110—Native Lore	....	3
Soc. 81—Introduction to Social Work	....	3
Ed. 160—Educational Sociology	....	2
Rec. 120—Camp Administration and Leadership	....	3
P. E. 160—Introduction to Recreation	3	....
P. E. 102, 104—Techniques of Sport Skills	2	2
P. E. 150, 170—Recreational Dance	2	2
Electives	....	2
Total	17	17

Senior Year	*— Semester —* *I*	 *II*
Ed. 147—Audio-Visual Education	2	....
Rec. 130—Observation and Service in Recreation	5	....
Ed. 152—The Adolescent: Characteristics and Problems	....	3
Rec. 140—Organization and Administration of Recreation	....	2
Cr. 3—Simple Crafts	....	2
P. E. 70—First Aid	2	....
P. E. 106, 108—Techniques of Sport Skills	2	2
Rec. 100—Co-recreational Program	....	3
P. S. 126—Coaching and Officiating	....	2
Electives	6	3
Total	17	17

Pre-physical Therapy Curriculum for Women

Junior Year		
Psych. 80—Educational Psychology	3	....
P. E. 100, 110—Kinesiology	2	2
Chem. 11, 13—General Chemistry	3	3
Zool. 53—Physiology of Exercise	2	....
Psych. 17—Mental Hygiene	3	....
P. E. 102, 104—Techniques of Sport Skills	2	2
P. E. 150, 170—Recreational Dance	2	2
Soc. 81—Introduction to Social Work	....	3
Cr. 3—Simple Crafts	....	2
Electives	....	3
Total	17	17

Senior Year		
Phys. 1, 2—Elements of Physics	3	3
P. E. 70—First Aid	2	....
Zool. 55—Development of the Human Body	2	....
Psych. 108—Child Psychology	3	....
P. E. 106, 108—Techniques of Sport Skills	2	2
Soc. 126—Juvenile Delinquency	....	3
Psych. 118—Psychology of Adolescence	....	3
P. E. 140—Therapeutics	....	3
Electives	5	3
Total	17	17

THE GRADUATE SCHOOL

C. O. Appleman, *Dean.*
Elsie M. Parrett, *Secretary.*

History and Organization

In the earlier years of the institution the Master's degree was frequently conferred, but the work of the graduate students was in charge of the departments concerned, under the supervision of the general faculty. The Graduate School of the University of Maryland was established in 1918, and organized graduate instruction leading to both the Master's and the Doctor's degree was undertaken. The faculty of the Graduate School includes all members of the various faculties who give instruction in approved graduate courses. The general administrative functions of the graduate faculty are delegated to a Graduate Council, of which the Dean of the Graduate School is chairman.

Admission

An applicant for admission to the Graduate School must hold a Bachelor's or a Master's degree from a college or university of recognized standing. The applicant shall furnish an official transcript of his collegiate record which for unconditional admission must show creditable completion of an adequate amount of undergraduate preparation for graduate work in his chosen field. Application for admission to the Graduate School should be made prior to dates of registration on blanks obtained from the office of the Dean.

After approval of the application a matriculation card, signed by the Dean, is issued to the student. This card permits one to register in the Graduate School. After payment of the fee, the matriculation card is stamped and returned to the student. It is his certificate of membership in the Graduate School and should be retained by the student to present at each succeeding registration.

Admission to the Graduate School does not necessarily imply admission to candidacy for an advanced degree.

Registration

All students pursuing graduate work in the University, even though they are not candidates for higher degrees, are required to register in the Graduate School at the beginning of each semester. In no case will graduate credit be given unless the student matriculates and registers in the Graduate School. The program of work for each session is arranged by the student with the major department and entered upon two course cards, which are signed first by the professor in charge of the student's major subject and then by the Dean of the Graduate School. One card is retained by the Dean. The student takes the other card, and in case of a new student, also the matriculation card, to the

Registrar's office, where the registration is completed. Students will not be admitted to graduate courses until the Registrar has certified to the instructor that registration has been completed. Course cards may be obtained at the Registrar's office or at the Dean's office. The heads of departments usually keep a supply of these cards in their respective offices.

Graduate Courses

Graduate students must elect for credit in partial fulfillment of the requirements for higher degrees only courses designated **For Graduates** or For Graduates and Advanced Undergraduates. Students who are inadequately prepared for graduate work in their chosen fields or who lack prerequisites for minor courses may elect a limited number of courses numbered from 1 to 99, but graduate credit will not be allowed for these courses. Courses that are audited are registered for in the same way as other courses, and the fees are the same.

Program of Work

The professor who is selected to direct a student's thesis work is the student's adviser in the formulation of a graduate program, including suitable minor work, which is arranged in cooperation with the instructors. To encourage thoroughness in scholarship through intensive application, graduate students in the regular sessions are limited to a program of fifteen credit hours per semester. If a student is preparing a thesis during the minimum residence for the master's degree, the registration in graduate courses should not exceed twelve hours for the semester.

Graduate Work in Professional Schools at Baltimore

Graduate courses and opportunities for research are offered in some of the professional schools at Baltimore. Students pursuing graduate work in the professional schools must register in the Graduate School, and meet the same requirements and proceed in the same way, as do graduate students in other departments of the University.

Graduate Work by Seniors in This University

A senior of this University who has nearly completed the requirements for the undergraduate degree may, with the approval of his undergraduate dean and the Dean of the Graduate School, register in the undergraduate college for graduate courses, which may later be transferred for graduate credit toward an advanced degree at this University, but the total of undergraduate and graduate courses must not exceed fifteen credits for the semester. Excess credits in the senior year cannot later be transferred unless such prearrangement is made. Graduate credits earned during the senior year may not be used to shorten the residence period required for advanced degrees.

Admission to Candidacy for Advanced Degrees

Application for admission to candidacy for the Master's and for the Doctor's degree is made on application blanks which are obtained at the office of the Dean of the Graduate School. These are filled out in duplicate by the student and submitted to his major department for further action and transmission to the Dean of the Graduate School. All applications for admission to candidacy must be approved by the Graduate Council.

Admission to candidacy in no case assures the student of a degree, but merely signifies he has met all the formal requirements and is considered by his instructors sufficiently prepared and able to pursue such graduate study and research as are demanded by the requirements of the degree sought. The candidate must show superior scholarship in graduate work already completed.

Application for admission to candidacy is made at the time stated in the sections dealing with the requirements for the degree sought.

REQUIREMENTS FOR THE DEGREES OF MASTER OF ARTS AND MASTER OF SCIENCE

Advancement to Candidacy. Each prospective candidate for the Master's degree is required to make application for admission to candidacy not later than the date when instruction begins for the semester in which the degree is sought. He must have completed at least twelve semester hours of graduate work at the University of Maryland. An average grade of "B" in all major and minor subjects is required.

Minimum Residence. A residence of at least two semesters, or equivalent, at this institution, is required.

Course Requirements. A minimum of twenty-four semester hours, exclusive of thesis and of research, with an average grade of "B" in courses approved for graduate credit, is required for the degrees of Master of Arts and Master of Science. At the option of the major department concerned the student may be required also to register for a maximum of six semester hours for research and thesis work. The total number of credit hours required for the degree would then be thirty. If the student is inadequately prepared for the required graduate courses, either in the major or minor subjects, additional courses may be required to supplement the undergraduate work. Of the twenty-four hours required in graduate courses, not less than twelve semester hours and not more then sixteen semester hours must be earned in the major subject. The remaining credits must be outside the major subject and must comprise a group of coherent courses intended to supplement and support the major work. Not less than one-half of the total required course credits for the degree, or a minimum of twelve, must be selected from courses numbered 200 or above. No credit for the degree of Master of Arts or Master of Science may be obtained for correspondence courses. The entire course of study must constitute a unified program approved by the student's major adviser and by the Dean of the Graduate School.

Transfer of Credit. Credit not to exceed six semester hours, obtained at other recognized institutions, may be transferred and applied to the course requirements of the Master's degree, provided that the work was of graduate character, and provided that it is approved for inclusion in the student's graduate program at the University of Maryland. This transfer of credit is submitted to the Graduate Council for approval when the student applies for admission to candidacy for the degree. Acceptance of the transferred credit does not reduce the minimum residence requirement. The candidate is subject to final examination by this institution in all work offered for the degree.

Thesis. In addition to the twenty-four semester hours in graduate courses a satisfactory thesis is required of all candidates for the degrees of Master of Arts and Master of Science. (Exceptions may be made in the case of candidates for the degree of Master of Arts in American Civilization. See page 178.) The thesis must demonstrate the student's ability to do independent work and it must be acceptable in literary style and composition. It is assumed that the time devoted to thesis work will be not less than the equivalent of six semester hours earned in graduate courses. With the approval of the student's major professor and the Dean of the Graduate School, the thesis in certain cases may be prepared in absentia under direction and supervision of a member of the faculty of this institution.

The original copy of the thesis must be deposited in the office of the Graduate School not later than two weeks before the convocation at which the degree is sought. The thesis should not be bound by the student, as the University later binds all theses uniformly. An abstract of the contents of the thesis, 200 to 250 words in length, must accompany it. A manual giving full directions for the physical make-up of the thesis is in the hands of each professor who directs thesis work, and should be consulted by the student before the typing of the manuscript is begun. Individual copies of this manual may be obtained by the student at the Dean's office, at nominal cost.

Final Examination. The final oral examination is conducted by a committee appointed by the Dean of the Graduate School. The student's adviser acts as the chairman of the committee. The other members of the committee are persons under whom the student has taken most of his major and minor courses. The chairman and the candidate are notified of the personnel of the examining committee at least one week prior to the period set for oral examinations. The chairman of the committee selects the exact time and place for the examination and notifies the other members of the committee and the candidate. The examination should be conducted within the dates specified at the end of the semester, but upon recommendation of the student's adviser, an examining committee may be appointed by the Dean of the Graduate School at any time when all other requirements for the degree have been completed. A report of the committee is sent to the Dean as soon as possible after the examination. A special form for this purpose is supplied to the chairman of the committee. Such a report is the basis upon which recommendation is made to the faculty that the candidate be granted the degree sought. The period for the oral examination is usually about one hour, but the time should be long enough to insure an adequate examination.

The examining committee also approves the thesis, and it is the candidate's obligation to see that each member of the committee has ample opportunity to examine a copy of the thesis prior to the date of the examination.

A student will not be admitted to final examination until all other requirements for the degree have been met. In addition to the oral examination a comprehensive written examination may be required at the option of the major department.

REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS IN AMERICAN CIVILIZATION

Studies in American Civilization are intended to prepare the student for teaching, for further study, and for research in the general field of American Civilization but with emphasis on one of two disciplines: history, including European backgrounds; or literature, including European literatures, particularly English. All students will be expected to understand the development of American institutions and to demonstrate proficiency in the literary, social, economic, and political history of the United States.

With the approval of his adviser, a candidate for the Master of Arts degree with a major in American Civilization may elect in lieu of the thesis six additional hours of course work, to include at least two substantial seminar papers. The total number of credit hours required for the degree would then be thirty semester hours.

Each candidate must present credits for at least fifteen semester hours of work in American literature and American history, and credits for at least fifteen semester hours in supporting courses (nine hours if a thesis is elected). Supporting courses will normally be in such fields as European or Latin-American history, English literature, comparative literature, philosophy, art, education, sociology, economics, and political science.

Each candidate must demonstrate in a written examination that he possesses a reading knowledge of one foreign language.

All other requirements are the same as for the degree of Master of Arts and Master of Science in other fields.

REQUIREMENTS FOR THE DEGREE OF MASTER OF EDUCATION

Thirty semester hours of course work are required, which may include courses in departments other than Education not to exceed one-half of the total thirty hours, such courses to be selected in conformity with the student's special needs as agreed upon by the student and his adviser. Of the thirty hours, not less than one-half must be on the 200 level.

At least four of the thirty semester hours must be in seminar work in connection with which two seminar papers will be prepared in specially prescribed form approved in writing by the instructor in charge of the seminar and the Dean of the College of Education, and filed in the College of Education. One of these papers shall deal with a topic in the student's major field of concentration.

Included in the program must be courses in educational statistics and in procedure of educational research.

The requirements in regard to advancement to candidacy, transfer of credits, and final oral examination are the same as for the degrees of Master of Arts and Master of Science.

REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION

The degree of Master of Business Administration represents a minimum of two semesters of graduate work in addition to the satisfaction of all undergraduate requirements for the bachelor's degree. This will normally include a minimum of twenty-four semester course hours and the completion of a satisfactory thesis.

The undergraduate prerequisites for graduate work leading to the degree of Master of Business Administration may be satisfied by completion of work for the degree of Bachelor of Science in Business Administration at the University of Maryland, or by equivalent work leading to a corresponding degree at other institutions, provided this work is of sufficiently high quality. Holders of other Bachelor's degrees must satisfy the prerequisite course requirements for the Bachelor of Science degree in Business Administration at this institution, which include Economics 140, 150, 160, and Business Administration 140, 150, 160, 180 and 181. All other requirements are the same as for the degrees of Master of Arts and Master of Science.

The degree of Master of Business Administration represents specialized work in a particular field of business administration. To this end course and thesis work should contribute to one field of specialization such as Accounting, Marketing, Finance, Labor, Public Utilities, Foreign Trade, or to some other field of the candidate's specialized interest.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

Advancement to Candidacy. Candidates for the Doctor's degree must be admitted to candidacy at least one academic year before the final examination. Applications for admission to candidacy for the Doctor's degree are filled out by the student and submitted to his major department for further action and transmission to the Dean of the Graduate School.

The applicant must have demonstrated to the head of the Foreign Language Department that he possesses a reading knowledge of French and German. With the approval of the major department and the Graduate Council, in special cases, another foreign language may be substituted for either French or German. Preliminary examinations or such other substantial tests as the departments may elect are also required for admission to candidacy.

Residence. The equivalent of three years of full time graduate study and research is the minimum required. Of the three years the equivalent of at least one year must be spent in residence at this university. On a part-time basis the time needed will be correspondingly increased. All work at other institutions offered in partial fulfillment of the requirements for the Ph.D. degree is submitted to the Graduate Council for approval, upon recommendation of the department concerned, when the student applies for admission to candidacy for the degree.

The Doctor's degree is not given merely as a certificate of residence and work, but is granted only upon sufficient evidence of high attainments in scholarship, and ability to carry on independent research in the special field in which the major work is done.

Major and Minor Subjects. The candidate must select a major and one or two closely related minor subjects. At least twenty-four semester hours, exclusive of research, are required in minor work. The remainder of the required residence is devoted to intensive study and research in the major field. The amount of required course work in the major subject will vary with the department and the individual candidate. The candidate must register for a minimum of twelve semester hours of research.

Thesis. The ability to do independent research must be shown by a dissertation on some topic connected with the major subject. An original typewritten copy and two clear, plain carbon copies of the thesis, together with an abstract of the contents, 250 to 500 words in length, must be deposited in the office of the Dean at least three weeks before the convocation at which the degree is sought. It is the responsibility of the student also to provide copies of the thesis for the use of the members of the examining committee prior to the date of the final examination.

The original copy should not be bound by the student, as the university later binds uniformly all theses for the general university library. The carbon copies are bound by the student in cardboard covers which may be obtained at the students' supply store. The abstracts are published biennially by the university in a special bulletin.

A manual giving full directions for the physical make-up of the thesis is in the hands of each professor who directs thesis work, and should be consulted by the student before typing of the thesis is begun. Students may obtain copies of this manual at the Dean's office, at nominal cost.

Final Examination. The final oral examination is held before a committee appointed by the Dean. One member of this committee is a representative of the graduate faculty who is not directly concerned with the student's graduate work. One or more members of the committee may be persons from other institutions who are distinguished scholars in the student's major field.

The duration of the examination is approximately three hours, and covers the research work of the candidate as embodied in his thesis, and his attainments in the fields of his major and minor subjects. The other detailed procedures are the same as those stated for the Master's examination.

Rules Governing Language Examinations for Candidates for the Degree of Doctor of Philosophy

1. A candidate for the Doctor's degree must show in a written examination that he possesses a reading knowledge of French and German. With the approval of the major department and the Graduate Council, in special cases another foreign language may be substituted for either French or German. The passages to be translated will be taken from books and articles in his specialized field. Some 300 pages of text from which the applicant wishes to have his examination chosen should be submitted to the head of the Department of Foreign Languages at least three days before the examination. The examination aims to test ability to use the foreign language for research purposes. It is presumed that the candidate will know sufficient grammar to distinguish inflectional forms and that he will be able to translate readily in two hours about 500 words of text, with the aid of a dictionary.

2. Application for admission to these tests must be filed in the office of the Department of Foreign Languages at least three days in advance of the tests.

3. No penalty is attached to failure in the examination, and the unsuccessful candidate is free to try again at the next date set for these tests.

4. Examinations are held near the office of the Department of Foreign Languages, on the first Wednesday of October, February, and June at 2 p. m.

FELLOWSHIPS AND ASSISTANTSHIPS

Fellowships. A number of fellowships have been established by the University. The stipend for the University fellows is $500 and the remission of all graduate fees except the diploma fee. Several industrial and special fellowships, with varying stipends, are also available in certain departments.

Fellows are required to render minor services prescribed by their major departments. The usual amount of service required does not exceed twelve clock hours per week. Fellows are permitted to carry a full graduate program, and they may satisfy the residence requirement for higher degrees in the normal time.

Applications for fellowships are made on blanks which may be obtained from the office of the Graduate School. The application, with the necessary credentials, is sent by the applicant directly to the Dean of the Graduate School. Applications which are approved by the Dean are forwarded to the departments, where final selection of the fellows is made. The awards of University fellowships are on a competitive basis.

Graduate Assistantships. A number of teaching and research assistantships are available in several departments. The compensation varies with the nature and amount of service required and with the term of appointment. The amount of credit that may be earned toward a degree likewise varies with the amount of time available for graduate study. The research assistants, especially those in the Experiment Station, usually participate in research that meets the requirements for a Master's or a Doctor's degree.

The compensation for assistantships usually ranges from $600 to $1,000 a year, plus the remission of all graduate fees except the diploma fee.

Applications for graduate assistantships are made directly to the departments concerned and appointments are made through the regular channels for staff appointments. Further information regarding these assistantships may be obtained from the department or college concerned.

SUMMER SESSION

HENRY BRECHBILL, *Acting Director*

A Summer Session of six weeks duration is conducted at College Park. Instruction is offered in most of the departments of the University although, because of lower enrollments than during fall and spring semesters, the course offerings may be somewhat reduced in some divisions. In the College of Education, however, the offerings are considerably expanded in the Summer Session and teachers in service and other persons who are employed during the regular school year will find a wide variety of courses available.

Terms of Admission

The admission requirements for those who desire to become candidates for degrees are the same as for any other session of the University. Before registering, a candidate for a degree will be required to consult the Dean of the College or School in which he wishes to secure the degree. Teachers and special students not seeking a degree are admitted to the courses of the summer session for which they are qualified. All such selection of courses must be approved by the Director of the Summer Session.

Credits and Certificates

The semester hour is the unit of credit as in other sessions of the University. In the summer session, a course meeting five times a week for six weeks and requiring the standard amount of outside work has a value of two semester hours.

Courses satisfactorily completed will be credited by the State Department of Education toward satisfying certification requirements of all classes.

Summer Graduate Work

Teachers and other graduate students working for degrees on the summer plan must meet the same requirements as to admission, credits, scholarship, and examinations as do students enrolled in the regular sessions of the University.

All teachers or others planning to do work towards graduate degrees in Education must apply to the Dean of the Graduate School for admission to the Graduate School.

For detailed information in regard to the Summer Session, consult the special Summer Session announcement, issued annually in April. A copy of this announcement may be secured from the Director, Summer Session, University of Maryland, College Park, Md.

EVENING COURSES

HENRY BRECHBILL, *Chairman*

Division of Evening Extension Courses

The University provides a limited program of evening instruction for undergraduates and graduates at College Park and in various other centers of the State. During the period 1942-1946, such courses were given at Cambridge, Frederick, Easton, Charlotte Hall, La Plata, Cumberland, Salisbury, Annapolis, Prince Frederick, Crisfield, Takoma Park, and Washington D. C.

The evening program is carried on primarily as a service to employed persons. Courses in any university subject may be offered in the evening program when there is a sufficient student demand and instructors are available.

A separate announcement of Evening Courses is issued early in the fall. A copy of this announcement, or any further information desired may be secured by communicating with:

Division of Evening Extension Courses,
University of Maryland,
College Park, Maryland.

SECTION III

Course Offerings—College Park

This section contains a list of all courses offered in the regular sessions of the University at College Park. Courses offered in the Summer Session and in the Baltimore Schools of the University are described in the separate catalogs issued by the several schools.

The University reserves the right to withdraw or discontinue any course for which an insufficient number of students have registered to warrant giving the course. In such an event, no fee will be charged for transfer to another course.

Courses are designated by numbers as follows:

1 to 99: courses for undergraduates.

100 to 199: courses for advanced undergraduates and graduates. (Not all courses numbered 100 to 199 may be taken for graduate credit.)

200 to 299: courses for graduates only.

A course with a single number extends through one semester. A course with a double number extends through two semesters.

Courses not otherwise designated are lecture courses. The number of hours' credit is shown by the arabic numeral in parentheses after the title of the course.

A separate schedule of courses is issued each semester, giving the hours places of meeting, and other information required by the student in making out his program. Students obtain these schedules when they register.

AERONAUTICAL ENGINEERING

For Advanced Undergraduates and Graduates

Aero. E. 101, 102. Aerodynamics (3, 2)—First and second semesters. Two lectures and one laboratory period a week first semester; two lectures a week second semester.

Basic fluid mechanics and the aerodynamic theory of airfoils. Airplane performance and stability calculation. Laboratory demonstration.

Aero. E. 103. Airplane Detail Drafting (1)—First semester. One laboratory period a week. Prerequisites, Dr. 1, 2, 3.

Standards of airplane drafting. Lofting.

Aero. E. 104. Airplane Layout Drafting (1)—Second semester. One laboratory period a week. Prerequisite, Aero. E. 103.

Layout of component parts of airplanes, wings, fuselage, etc.

Aero. E. 105, 106. Airplane Fabrication Shop (1, 2)—First and second semesters. One laboratory period a week first semester; two laboratory periods a week second semester. Prerequisite, Shop 1.

Machine shop, sheet metal forming and fabrication; wood and plastics; riveting, and welding.

Aero. E. 107, 108. Airplane Design (4, 4)—First and second semesters. Two lectures and two laboratory periods a week. Prerequisites, Mech. 50; Aero. E. 102 and 104.

Theory and practice of airplane design.

Aero. E. 109, 110. Aircraft Power Plants (4, 4)—First and second semesters. Three lectures and one laboratory period a week. Prerequisites, Mech. 50, M. E. 100.

Thermodynamics and dynamics of aircraft power plant design. Gas turbines and jet propulsion. Study and tests of aircraft engines in laboratory.

Aero. E. 111, 112. Aeronautical Laboratory (2, 2)—First and second semesters. One lecture and one laboratory period a week.

Wind tunnel tests. Structure tests. Experiments on hydraulic systems, landing gear operation, etc. Performance tests of aircraft engines and propellers.

Aero. E. 113, 114. Mechanics of Aircraft Structures (3, 3)—First and second semesters. Prerequisite, Mech. 50 and Math. 64.

Principles and problems of airplane stress analysis and design.

For Graduates

Aero. E. 200, 201. Advanced Aerodynamics (3, 3)—First and second semesters. Two lectures and one laboratory period a week. Prerequisites, Aero. E. 101, 102, Math. 64.

Special problems in performance and stability of aircraft. Design of aircraft for speeds approaching the velocity of sound. Wind tunnel research.

Aero. E. 202, 203. Advanced Aircraft Structures (3, 3)—First and second semesters. Two lectures and one laboratory period a week. Prerequisites, Aero. E. 115, 116.

Study of latest scientific reports on aircraft structures. Special problems on wing design for high speeds, high wing loading, thin wing sections, and high aspect ratio. Flexural and torsional stiffness of complete wings. Tests on structures in laboratory.

Aero. E. 204, 205. Aircraft Dynamics (3, 3)—First and second semesters. Two lectures and one laboratory period a week. Prerequisites, Mech. 50, Math. 64.

Study of vibrations, wing flutter, gust loads, and dynamics of landing. Calculations of natural frequencies of vibration of aircraft structures.

Aero. E. 206, 207. Advanced Aircraft Power Plants (3, 3)—First and second semesters. Two lectures and one laboratory period a week. Prerequisite, M. E. 100; Aero. E. 109, 110.

Special problems of thermodynamics and dynamics of aircraft power plants; jet and rocket engines. Research in power plant laboratory.

Aero. E. 208, 209. Advanced Aircraft Design and Construction (3, 3)—First and second semesters. One lecture and two laboratory periods a week. Prerequisite, Aero. E. 107, 108; Math. 64.

A course in project engineering. The student studies methods involved in the design, production, and flight testing of aircraft. Problems in design, production, management, testing, etc.

AGRICULTURAL ECONOMICS AND FARM MANAGEMENT

For Advanced Undergraduates

A. E. 90, 91. Seminar (1, 1)—First and second semesters.

Students will prepare and present reports on economic literature and current agricultural economic problems.

For Advanced Undergraduates and Graduates

A. E. 100. Farm Economics (3)—First semester. Prerequisite, Econ. 31, 32, or Econ. 37.

A general course in agricultural economics, with special reference to population trends, the factors in agricultural production, agricultural wealth, land tenure, farm labor, agricultural credit, the tariff, price movements, and marketing.

A. E. 101. Marketing of Farm Products (3)—Second semester. Prerequisite, Econ. 31, 32, or Econ. 37.

The development of marketing, its scope, channels and agencies of distribution, functions, costs, methods used, and services rendered.

A. E. 103. **Cooperation in Agriculture** (3)—First semester.

Historical and comparative development of farmers' cooperative organizations; reasons for failure and essentials to success; commodity developments; operative practices; banks for cooperatives; present trends.

A. E. 104. **Farm Finance** (3)—Second semester.

A study of credit principles as applied to private and cooperative farm businesses and the agencies extending farm credit. The needs for and benefits of farm insurance, including fire, crop, livestock, and life insurance.

A. E. 105. **Food Products Inspection** (2)—Second semester. One lecture and one laboratory period a week.

This course is designed to give students primary instruction in the grading, standardizing and inspection of fruits and vegetables, dairy products, poultry products, meats, and other food products. Theoretical instruction will be given in the form of lectures, while the demonstrational and practical work will be conducted through laboratories and field trips to Washington, D. C., and Baltimore.

A. E. 106. **Prices of Farm Products** (3)—Second semester. Two lectures and one laboratory period a week.

A general course in prices, price relationships, and price analysis, with emphasis on prices of agricultural products.

A. E. 107. **Analysis of the Farm Business** (3)—First semester. One lecture and two laboratory periods a week.

A concise, practical course in the keeping, summarizing, and analyzing of farm accounts.

A. E. 108. **Farm Management** (3)—Second semester.

A study of the organization and operation of farms from the standpoint of efficiency, selection of farms, size of farms, leasing systems, and factors affecting profits. Students will make an analysis of the actual farm business and practices of different types of farms, and make specific recommendations as to how these farms may be organized and operated as successful businesses.

A. E. 109. **Research Problems** (1-2)—First and second semesters.

With the permission of the instructor, students will work on any research problems in agricultural economics. There will be occasional class meetings for the purpose of making reports on progress of work.

A. E. 111. **Land Economics** (3)—First semester.

Concepts of land economy are discussed, as well as conditions and tendencies influencing land requirements in relation to land resources; a study of major land problems and land policies; farm tenancy; tax delinquency and tax reverted lands; land use adjustments; and measures for better use of our land resources.

A. E. 112. Agricultural Policy (3)—Second semester.

A study of the effect of governmental programs and policy on agricultural production, prices and income.

For Graduates

A. E. 200, 201. Special Problems in Farm Economics (2, 2)—First and second semesters.

An advanced course dealing extensively with some of the economic problems affecting the farmer, such as land values, taxation, credit, prices, production adjustments, transportation, marketing, and cooperation.

A. E. 202. Seminar (1-2)—First and second semesters.

This course will consist of special reports by students on current economic subjects, and a discussion and criticism of the same by the members of the class and instructional staff.

A. E. 203. Research—Credit according to work accomplished.

Students will be assigned research in agricultural economics under the supervision of the instructor. The work will consist of original investigation in problems of agricultural economics.

A. E. 210. Taxation in Relation to Agriculture (2)—Second semester.

Principles and practices of taxation in their relation to agriculture, with special reference to the trends of tax levies, taxation in relation to land utilization, taxation in relation to ability to pay and benefits received.

A. E. 211. Agricultural Taxation in Theory and Practice (3)—First semester. Two lectures and one laboratory period a week.

Economic effects of taxation upon the welfare of rural society; theory of the general property tax, business and license taxes, the income tax, the sales tax, special commodity taxes, inheritance and estate taxes as applied to the support of rural governmental functions; practical and current problems in taxation.

A. E. 212, 213. Land Utilization and Agricultural Production (3, 3)—Three hours a week, first and second semesters.

A presentation, by regions, of the basic physical conditions of climate, topography and soils; the economic and social forces that have influenced agricultural settlement and the resultant utilization of the land; followed by a consideration of the regional trends and interregional shifts in land utilization and agricultural production.

A. E. 214. Consumption of Farm Products and Levels of Living (3)—Second semester.

A presentation of trends in the national per capita consumption of farm products, followed by studies based principally on the Consumers' Purchase Survey; regional and local variations in consumption and levels of living.

A. E. 215. Advanced Agricultural Cooperation (3)—First semester.

An appraisal of agricultural cooperation as a means of improving the financial status of farmers. More specifically, the course includes a critical analysis and appraisal of specific types and classes of cooperatives.

AGRICULTURAL EDUCATION AND RURAL LIFE

R. Ed. 1. Introduction to Agriculture (0)—First semester. Required of all Freshmen in the College of Agriculture.

A non-credit series of lectures introducing the student to the broad field of agriculture.

For Advanced Undergraduates

R. Ed. 51. Farm Practicums and Demonstrations (2)—First semester. Two laboratory periods a week. Open only to students majoring in Agricultural Education.

This course is designed to assist the student in relating the learning acquired in the several departments with the problems of doing and demonstrating which he faces in the field and in the classroom as a teacher of agriculture. Deficiencies are checked and corrected by laboratory practice.

R. Ed. 90. Practice Teaching (5)—First semester. Open only to students majoring in Agricultural Education.

Under the direction of a critic teacher the student is required to analyze and prepare special units of subject matter in agriculture, plan lessons, and teach in cooperation with the critic teacher, exclusive of observation, not less than 100 clock hours of vocational agriculture and related subjects.

R. Ed. 91. Practice Teaching (1-4)—First and second semesters. Prerequisite, R. Ed. 90.

A continuation of R. Ed. 90 for those students wishing to acquire additional experience in teaching.

For Advanced Undergraduates and Graduates

R. Ed. 107. Observation and Analysis of Teaching for Agricultural Students (3)—Two lectures and one laboratory period a week. Open only to students majoring in Agricultural Education.

This course deals with an analysis of pupil learning in class groups.

R. Ed. 109. Teaching Secondary Vocational Agriculture (3)—First semester. Open only to students majoring in Agricultural Education.

A comprehensive course in the work of high school departments of vocational agriculture. It emphasizes particularly placement, supervised farming programs, the organization and administration of Future Farmer work, and objectives and methods in all-day instruction.

R. Ed. 111. Teaching Part-time and Adult Classes (1)—First semester. Open only to students majoring in Agricultural Education.

Characteristics of part-time and adult class instruction in agriculture. Determining needs for organizing a course; selecting materials for instruction; and class management. Emphasis is placed on the conference method of teaching.

R. Ed. 112. Departmental Management (1)—Second semester. One laboratory period a week. Prerequisites, R. Ed. 107, 109.

The analysis of administrative programs for high school departments of vocational agriculture. Investigations and reports.

R. Ed. 114. Rural Life and Education (3)—Second semester.

An intensive study of the educational agencies at work in rural communities, stressing an analysis of school patronage areas, the possibilities of normal life in rural areas, early beginnings in rural education, and the conditioning effects of educational offerings.

For Graduates

R. Ed. 201, 202. Rural Life and Education (3, 3)—First and second semesters. Prerequisite, R. Ed. 114 or equivalent.

A sociological approach to rural education as a movement for a good life in rural communities.

R. Ed. 207, 208. Problems in Vocational Agriculture, Related Science, and Shop (2, 2)—First and second semesters.

In this course special emphasis is placed upon the current problems facing teachers of vocational agriculture. It is designed especially for persons who have had several years of teaching experience in this field.

R. Ed. 250. Seminar in Rural Education (1-2)—First and second semesters.

Problems in the organization, administration, and supervision of the several agencies of rural education. Investigations, papers, and reports.

R. Ed. 251. Research—Credit hours according to work done.

AGRICULTURAL ENGINEERING

For Advanced Undergraduates

Agr. Engr. 54. Farm Mechanics (2)—First semester. Two laboratory periods a week.

This course consists of laboratory exercises in practical farm shop and farm equipment repair and construction projects. It is available only to seniors in agricultural education.

For Advanced Undergraduates and Graduates

Agr. Engr. 101. Farm Machinery (3)—First semester. Two lectures and one laboratory period a week.

A study of the economics, design and adjustments of modern horse and tractor-drawn machinery, including applications of electricity to farm operations. Laboratory work consists of detailed study of actual machines, their calibration, adjustment, and repair.

Agr. Engr. 102. Gas Engines, Tractors and Automobiles (3)—Second semester. Two lectures and one laboratory period a week.

A study of the design, operation, and repair of the internal combustion engines, tractors, and automobiles used in farm practice.

Agr. Engr. 105. Farm Buildings (2)—First semester.

A study of all types of farm structures; also of farm lighting, heating, water supply and sanitation systems.

Agr. Engr. 107. Farm Drainage (2)—Second semester. One lecture and one laboratory period a week.

A study of farm drainage systems, including theory of tile under-drainage, the depth and spacing of leterals, calculation of grades, methods of construction, and the use of engineering instruments. A smaller amount of time will be spent upon drainage by open ditches, and the laws relating thereto.

AGRONOMY AND SOILS

Division of Crops

Agron. 1. Crop Production (3)—First and second semesters. Two lectures and one laboratory period a week.

Culture, use, improvement, adaptation, distribution, and history of Cereal and Forage Crops.

Agron. 30. Cereal Crop Production (3)—First semester. Two lectures and one laboratory period a week.

Continuation study of investigations in Cereal Crop production.

Agron. 31. Forage Crop Production (3)—Second semester. Two lectures and one laboratory period a week.

Continuation study of investigations in Forage Crop production.

For Advanced Undergraduates

Identification, judging and grading farm crops, including market classifications and grades as recommended by the United States Bureau of Markets.

Agron. 54. Selected Crop Studies (2-4)—First and second semesters. Prerequisite, Agron. 1.

Advanced individual study of field crops of special interest to the student.

For Advanced Undergraduates and Graduates

Agron. 103. Crop Breeding (2)—First semester. Prerequisite, Zool. 104.

The principles of breeding as applied to field crop plants and methods used in plant improvement.

Agron. 151. Cropping Systems (2)—Second semester.

The bringing to bear of information, from various courses upon the development of balanced cropping systems, appropriate to different objectives and different areas of the State.

For Graduates

Agron. 201. Crop Breeding (2-4)—First semester. Prerequisite, consent of instructor.

Similar to Agron. 103, but better adapted to graduate students and offering a wider range of choice of material to suit special cases.

Agron. 203. Seminar (1)—First and second semesters.

Reports by students on current scientific publications on crops or soils.

Agron. 209. Research (4-8)—First and second semesters.

Credit according to work accomplished. With approval or suggestion of the head of the department, the student will choose his own problem for study.

Division of Soils

Soils 1. General Soils (3)—First semester. Prerequisites, Chem. 1 or registration therein.

A broad conception of the fundamentals of soils showing the origin, development, relation to natural sciences, soil uses, effect on civilization, soil properties and relation to soil problems.

Soils 2. Soil Fertility Principles (3)—Second semester. Two lectures and one two-hour demonstration laboratory each week. Prerequisites, Soils 1, Organic Chemistry, General Bacteriology.

A study of the biological, chemical and physical characteristics of soils that are important in growing crops. Soil deficiencies of physical fertility or biological nature and their correction by the use of lime, fertilizers, organic materials and rotations are discussed and illustrated.

For Advanced Undergraduates

Soils 51. Soil Investigation Methods (2)—First semester. Two three-hour laboratory periods a week. Prerequisites, Soils 2 and Quantitative and Organic Chemistry or registration therein.

A laboratory study of the common biological, chemical, and physical methods of examining a soil to determine its nutritional needs and fertility level.

For Advanced Undergraduates

Soils 103. Soil Geography (3)—Second semester. Two lectures and one two-hour laboratory period a week. Prerequisites, Soil 1 and Geology.

A study of the factors and processes of soil formation in the world and Maryland, the relation of soils to related geographic features, in development and use of soil classification and soil capability grouping and uses. The laboratory period is used largely for field trips to examine soils in place.

Soils 112. Soil Conservation (3)—First semester. Prerequisite, Soils 1.

A study of the factors affecting the preservation of the desired physical, chemical, and biological functions of soil and soil moisture; the influence of soil deterioration on society; methods of soil conservation. Field trips are made to farms using different conservation practices.

Soils 120. Soil Management (3)—Second semester. Prerequisites, Soils 2 and 103.

A study is made of detailed soil problems and their solutions; soil management practice for maximum production and soil maintenance; and the relation of soils to agriculture and society in general.

For Graduates

Soils 201. Special Problems and Research (6-12)—First and second semesters. Laboratory and library work.

Original investigations of physical, chemical and biological soil problems and their relation to lime, fertilizer and nutritional studies.

Soils 202, 203. Soil Science (3, 3)—First and second semesters. Three discussion periods a week. Prerequisite, approval of instructor.

A review of the development and modern conceptions of the pysical, chemical and biological nature of soils and their contribution to soil science.

Soils 212, 213. Soil Research Technique (2, 2)—First and second semesters. Two three-hour laboratory periods a week. Prerequisite, approval of instructor.

A laboratory study of methods, technique, and equipment used to investigate the various soil problems. It is the laboratory part of the soil science course.

ANIMAL HUSBANDRY

A. H. 2. Fundamentals of Animal Husbandry (3)—First semester. Three laboratory periods a week.

A study of the types, breeds and market classes of beef cattle, sheep, hogs, and horses; general problems in breeding, feeding and management. Practice in the selection, fitting and showing of livestock.

A. H. 31. Livestock Judging (2)—Second semester. Two laboratory periods a week. Prerequisite, A. H. 2.

Training in judging of beef cattle, sheep, hogs and draft horses. Occasional trips to farms where outstanding herds and flocks are maintained.

For Advanced Undergraduates

A. H. 52. Feeds and Feeding (3)—First semester. Two lectures and one laboratory period a week. Prerequisites, Chem. 1, 3.

Elements of nutrition, source, characteristics, and adaptability of the various feeds to the several classes of livestock; feeding standards; the calculation and compounding of rations.

A. H. 53. Principles of Breeding (3)—Second semester. Two lectures and one laboratory period a week. Prerequisite, Zool. 104.

The practical aspects of animal breeding, heredity, variation, selection, development, systems of breeding, and pedigree work are considered.

A. H. 55. Livestock Management (3)—Second semester. One lecture and two laboratory periods a week. Prerequisite, A. H. 2.

A course designed to familiarize students with various systems of livestock farming, together with practical methods of handling and managing livestock. Practice and training in the feeding, fitting and preparation of animals for show and work purposes.

A. H. 56. Meat and Meat Products (1)—First semester. One laboratory period a week. Prerequisite, A. H. 2.

Designed to give information on the processing and handling of the nation's meat supply. A study of the physical and structural qualities which affect the value of meat and meat products. Trips are made to packing houses and meat distributing centers.

A. H. 58. Advanced Livestock Judging (2)—First semester. Two laboratory periods a week. Prerequisite, A. H. 31.

An advanced course in the selection and judging of purebred and commercial meat and work animals. The most adept students enrolled in this course are chosen to represent the University of Maryland in intercollegiate livestock judging contests.

A. H. 60. Beef Cattle Production (2)—First semester. Prerequisite, A. H. 2.

Principles and practices underlying the economical production of beef cattle, including a study of breeds and their adaptability; breeding, feeding and management of purebred and commercial herds.

A. H. 64. Sheep Production (2)—First semester. Prerequisite, A. H. 2.

Principles and practices underlying economical production of sheep, including a study of the breeds and their adaptability. Breeding, feeding and management of purebred and commercial flocks.

A. H. 67. Pork Production (2)—Second semester. Prerequisite, A. H. 2.

Principles and practices underlying the economical production of hogs; breeding, feeding and management of purebred and commercial herds; breeds of swine and their adaptability.

A. H. 69. Draft Horse Production (2)—Second semester. Prerequisite, A. H. 2.

Principles and practices underlying economical production and use of draft horses, including a study of breeds and their adaptability.

For Advanced Undergraduates and Graduates

A. H. 112. Livestock Markets and Marketing (2)—First semester. Prerequisite, A. H. 2.

History and development of livestock markets and systems of marketing; trends of livestock marketing; effect of changes in transportation and refrigeration facilities; the merchandising of meat products.

A. H. 114. Animal Nutrition (3)—First semester. Prerequisites, Chem. 31, 32, 33, 34; A. H. 52.

Processes of digestion, absorption, and metabolism of nutrients; nutritional balances; nature of nutritional requirements for growth, production and reproduction.

A. H. 116. Light Horse Production (1)—First semester.

A study of the light horse breeds with emphasis on the types and usefulness of each. A discussion of principles of selection and breeding of light horses is included in this course.

A. H. 117. Advanced Light Horse Production (1)—Second semester. Prerequisite, A. H. 116.

A continuation of A. H. 116. Included is a study of the organization of the light horse farm, proper methods of feeding and training, control of disease, treatment and care of injuries, sale of surplus stock.

For Graduates

A. H. 201. Special Problems in Animal Husbandry (2-4)—Credit given in proportion to amount of work completed.

Problems which relate specifically to the character of work the student is pursuing will be assigned.

A. H. 202, 203. Seminar (1, 1)—First and second semesters.

Students are required to prepare papers based upon current scientific publications relating to animal husbandry or upon their research work for presentation before and discussion by the class.

A. H. 204. Research—Credit to be determined by the amount and character of work done.

With the approval of the head of the department, students will be required to pursue original research in some phase of animal husbandry, carrying the same to completion, and report the results in the form of a thesis.

A. H. 205. Advanced Breeding (2)—Second semester. Prerequisites, Zool. 104, A. H. 53.

This course deals with the more technical phases of heredity and variation; selection and selection indices; breeding systems; specific inheritance in farm animals.

A. H. 206, 207. Advanced Livestock Management (3, 3)—First and second semesters. Two lectures and one laboratory period a week.

An intensive study of the newer developments in animal breeding, animal physiology, animal nutrition, endocrinology and other closely allied fields as they apply to the management and commercial production of livestock.

*ART

Practical Art, see page 298.

Art 1, 2. Antique Drawing (3, 3).

Charcoal drawing from casts, preparatory to Life and Portrait drawing and painting. Stress is placed on fundamental principles, such as the study of proportion, values, modelling, etc.

Art. 5, 6. Still-Life (3, 3).

First half semester devoted to elementary theory and practice of drawing. Methods of linear and tonal description with emphasis on perspective and light-and-shade. Second half semester, elementary theory and practice of oil painting. Elementary theory and practice of composition introduced. Second semester, more advanced problems.

Art 9, 10. Historical Survey of Painting, Sculpture and Architecture (3, 3).

An understanding of the epochs in the advance of civilization as expressed through architecture, painting and sculpture. A background to more detailed study.

Art. 11, 12. Portrait Class (drawing and painting) (3, 3). Prerequisite, Art 2 and 6.

Thorough draftsmanship and knowledge of characterization and composition stressed.

Art. 14, 15. Life Class (drawing and painting) (3, 3). Prerequisite, Art 2 and 6.

Careful study of the human figure for construction, action, form, and color.

Art 16. Pictorial Composition (2).

Principles underlying graphic presentation of ideas. Problems to stimulate the students' imagination and enable them to do creative work.

Art 100, 101. Art Appreciation (2, 2). Prerequisite, Art. 9.

A course designed to help the student to a fuller appreciation and greater enjoyment of art. Lectures, discussions, slides and occasional visits to museums.

Art 112. Contemporary Art (2). Prerequisite, Art. 10.

The study of the outstanding modern art developments, with emphasis on the emergence of an American Art as such. (Can be used as an alternate for Art 101.)

Art 102. Projects (3, 3). Prerequisites, Art 15 and 16.

Assignments of pictorial compositions aimed at both mural decoration and easel picture problems. Emphasis on the psychological and sociological angles of pictorial composition, involving some research.

---

* For other courses in Art, see Home Economics.

ASTRONOMY

Astr. 1, 2. Astronomy (3, 3)—First and second semesters.

An elementary course in descriptive astronomy.

Astr. 5. Navigation (3)—Second semester. Prerequisite, Math. 14 and 16.

The theory and practice of navigation.

BACTERIOLOGY AND FOOD TECHNOLOGY

Bact. 1. General Bacteriology (4)—First and second semesters. Two lectures and two laboratory periods a week.

The physiology, culture and differentiation of bacteria. Fundamental principles of microbiology in relation to man and his environment. Laboratory fee, $8.00.

Bact. 5. Physiology of Bacteria (4)—First and second semesters. Two lectures and two laboratory periods a week. Prerequisite, Bact. 1.

Emphasis upon the fundamental physiological activities of bacteria; cytology and growth; respiration. Preparation of culture media, reagents and staining solutions; introduction to preparation room procedures. Refinement of bacteriological technique. Laboratory fee, $8.00.

Bact. 51. Household Bacteriology (3)—First and second semesters. Two lectures and one laboratory period a week. For Home Economics students only.

Morphology and physiology of the bacteria, yeasts and molds. Application of the effect of chemical and physical agents in the control of microbial growth. Relationship of microbiology to home sanitation, food preservation and manufacture; personal and community hygiene. Laboratory fee, $8.00.

Bact. 53. Sanitary Bacteriology (4)—First and second semesters. Two lectures and two laboratory periods a week. Prerequisite, Bact. 5.

Bacteriological and public health aspects of water supplies; swimming pool sanitation, sewage disposal, disposal of garbage and refuse; municipal sanitation. Standard methods of examination of water and sewage. Occasional inspection trips. Laboratory fee, $8.00.

Bact. 54. Lectures in Sanitary Bacteriology (1)—First and second semesters. For Junior and Senior students majoring in Engineering.

This course comprises the lectures only of Bact. 53.

For Advanced Undergraduates and Graduates

Bact. 101. Pathogenic Bacteriology (4)—First semester. Two lectures and two laboratory periods a week. Prerequisite, Bact. 5.

The role of microorganisms in the diseases of man and animals with emphasis upon the differentiation and culture of bacterial species, types of disease, modes of disease transmission; prophylactic, therapeutic and epidemiological aspects. Laboratory fee, $8.00.

Bact. 102. Lectures in Pathogenic Bacteriology (2)—First semester. Two lectures a week. Prerequisite, Bact. 5.

This course comprises the lectures only of Bact. 101.

Bact. 103. Serology (4)—Second semester. Two lectures and two laboratory periods a week. Prerequisite, Bact. 101.

Infection and resistance; principles and types of immunity; hypersensitiveness. Fundamental techniques of major diagnostic immunological reactions and their application. Laboratory fee, $8.00.

Bact. 105. Clinical Methods (4)—First semester. Two lectures and two laboratory periods a week. Prerequisite, Bact. 103.

A practical course designed to integrate clinical laboratory procedures in terms of hospital and public health demands. Examination of sputum, feces, blood, spinal fluids, urine, etc. Laboratory fee, $8.00.

Bact. 108. Epidemiology and Public Health (3)—Second semester. Three lectures a week. Prerequisite, Bact. 101.

History, characteristic features and epidemiology of the important communicable diseases; public health aspects of man's struggle for existence; public health administration and responsibilities; vital statistics.

Bact. 131. Food Bacteriology (4)—Second semester. Two lectures and two laboratory periods a week. Prerequisite, Bact. 5.

Relation of bacteria, yeasts and molds to fruits, vegetables, meats, seafood, and poultry products. Methods of examination, and standards of quality. A study of control measures. Laboratory fee, $8.00.

Bact. 133. Dairy Bacteriology (4)—First semester. Two lectures and two laboratory periods a week. Prerequisite, Bact. 5.

Relation of bacteria, yeasts and molds to milk, cream, butter, ice-cream, cheese and other dairy products. Standard methods of examination, public health requirements, plant sanitation. Occasional inspection trips. Laboratory fee, $8.00.

Bact. 135. Soil Bacteriology (4)—First semester. Two lectures and two laboratory periods a week. Prerequisite, Bact. 5.

The role played by microorganisms in the soil; nitrification, denitrification, nitrogen-fixation and decomposition processes; cycles of elements; relationships of microorganisms to soil fertility. Laboratory fee, $8.00.

Bact. 161. Systematic Bacteriology (4)—Second semester. Two lectures and two laboratory periods a week. Prerequisite, 20 hours of Bacteriology.

History of bacterial classification; genetic relationships; international codes of nomenclature; bacterial variation as it affects classification. Laboratory fee, $8.00.

Bact. 181, 183. Bacteriological Problems (3)—First and second semesters. Prerequisites, 16 credits in Bacteriology. Registration only upon the consent of the instructor.

This course is arranged to provide qualified undergraduate majors in Bacteriology and majors in allied fields an opportunity to pursue specific bacteriological problems under the supervision of a member of the department. Laboratory fee, $8.00.

For Graduates

Bact. 201. Advanced Pathogenic Microbiology (4)—First semester. Two lectures and two laboratory periods a week. Prerequisite, 30 credits in Bacteriology and allied fields, including Bact. 103.

A course integrating medical microbiology and immunology in the disease complex. Diseases caused by yeasts, molds, viruses, rickettsia bodies, and protozoa; tissue culture; the study of recent literature in the medical field. Laboratory fee, $8.00.

Bact. 205. Bacterial Metabolism (4)—Second semester. Two lectures and two laboratory periods a week. Prerequisite, 30 credits in Bacteriology and allied fields, including Chemistry 160 and 161.

The mechanics of bacterial growth; physiological inter-relationship; antibiotic products; the complexity of enzymatic reactions; biochemistry of microorganisms in industrial fermentations. Laboratory fee, $8.00.

Bact. 231. Advanced Food Bacteriology (4)—First semester. Two lectures and two laboratory periods a week. Prerequisite, 30 credits in Bacteriology including Bact. 131.

The role of microorganisms in food handling and processing with emphasis upon commercial and factory aspects. Laboratory fee, $8.00.

Bact. 280, 282. Seminar (1)—First and second semesters. Prerequisite, 30 credits in Bacteriology.

Discussions and reports prepared by majors in Bacteriology engaged in current research; presentations of selected subjects dealing with recent advances in microbiology.

Bact. 290. Research—First and second semesters. Prerequisite, 30 credits in Bacteriology.

Credits according to work done. The investigation is outlined in consultation with and pursued under the supervision of a senior staff member of the department. Laboratory fee, $8.00.

Food Technology

F. Tech. 100. Food Microscopy (3)—First semester. One lecture and two laboratory periods a week. Prerequisite, Bact. 131. (Not offered 1946-1947.)

Microscopical analysis of foods following the methods used in the Federal Government and other agencies. Studies of the structural composition of agricultural and manufactured foods. Use of microscopic tests in factory control and analyses. Laboratory fee, $8.00.

F. Tech. 108. Preservation of Poultry Products (3)—First semester. One lecture and two laboratory periods a week. Prerequisite, Bact. 131. (Not offered 1946-1947.)

Studies in the microbiology of poultry, alive and during storage; microbiology of shell eggs, fresh and during storage, frozen and dried eggs. Laboratory fee, $8.00.

F. Tech. 110. Regulatory Control (2)—Second semester. Two lectures and demonstrations a week. Prerequisite, Bact. 131. (Not offered 1946-1947.)

Methods followed in the control of foods in interstate and intrastate commerce. Laboratory standards of control.

F. Tech. 120. Food Sanitation (3)—Second semester. One lecture and two laboratory periods a week and field work. Enrollment limited to majors in Food Technology. (Not offered 1946-1947.)

Principles of sanitation in food manufacture and distribution; methods of controlling sanitation in commercial canning, pickling, bottling, preserving, refrigeration, dehydration, etc. Laboratory fee, $8.00.

F. Tech. 140. Technology Conference (1)—First and second semesters. (Not offered 1946-1947.)

Reports and discussions of current developments in the field of food technology.

BOTANY

Bot. 1. General Botany (4)—First and second semesters. Two lectures and two laboratory periods a week.

General introduction to botany, touching briefly on all phases of the subject. Emphasis is on the fundamental biological principles of the higher plants. Laboratory fee, $5.00.

Bot. 2. General Botany (4)—Second semester. Two lectures and two laboratory periods a week. Prerequisite, Bot. 1.

A brief evolutionary study of algae, fungi, liverworts, mosses, ferns and their relatives, and the seed plants, emphasizing their structure reproduction, habitats, and economic importance. Laboratory fee, $5.00.

Bot. 20. Diseases of Plants (3)—First semester. Two lectures and one laboratory period a week. Prerequisite, Bot. 1.

An introductory study of the symptoms and causal agents of plant diseases and measures for their control. Laboratory fee, $5.00.

For Advanced Undergraduates

Bot. 50. Plant Taxonomy (3)—Second semester. One lecture and two laboratory periods a week. Prerequisite, Bot. 1, or equivalent.

A study of the principles of plant classification, based on the collection and identification of local plants. Laboratory fee, $5.00.

Bot. 51. Plant Microtechnique (2)—Second semester. Two laboratory periods a week. Prerequisite, Bot. 1.

Principles and methods involved in the preparation of permanent microscope slides of plant materials. Laboratory fee, $5.00.

Bot. 52. Seminar (1)—First and second semesters.

Discussion of special topics, current literature, problems and progress in all phases of botany. For seniors only, majors and minors in botany or biological science.

A. Plant Morphology and Plant Taxonomy

For Advanced Undergraduates and Graduates

Bot. 111. Plant Anatomy (3)—First semester. One lecture and two laboratory periods a week. Prerequisite, Bot. 51, or equivalent.

The origin and development of the organs and tissue systems in the vascular plants. Laboratory fee, $5.00.

Bot. 114. Advanced Plant Taxonomy (3)—First semester. One lecture and two laboratory periods a week. Prerequisite, Bot. 50.

Principles and criteria of plant classification. Reviews and criticisms of current taxonomic literature. Collection and classification of Maryland plants. Laboratory fee, $5.00.

Bot. 115. Structure of Economic Plants (2)—Second semester. Two laboratory periods a week. Prerequisite, Bot. 111.

A detailed microscopic study of the anatomy of the chief fruit and vegetable crops. Laboratory fee, $5.00.

Bot. 116. History and Philosophy of Botany (1)—First semester. Prerequisite, 15 semester hours of botany.

Discussion of the development of ideas and knowledge about plants, leading to a survey of contemporary work in botanical science.

For Graduates

Bot. 211. Cytology (4)—Second semester. Two lectures and two laboratory periods a week. Prerequisites, Bot. 51 and Zool. 104 (Genetics) or equivalent.

A detailed study of the chromosomes in mitosis and meiosis, and the relation of these to current theories of heredity and evolution. Laboratory fee, $5.00.

Bot. 212. Plant Morphology (2)—First semester. Two laboratory periods a week. Prerequisites, Bot. 50, Bot. 111, or equivalent.

A comparative study of the morphology of the flowering plants, with special reference to the phylogeny and development of floral organs. Laboratory fee, $5.00.

Bot. 213. Seminar (1)—First and second semesters. Prerequisite, permission of instructor.

Discussion of special topics in plant morphology, anatomy, and cytology.

Bot. 214. Research—Credit according to work done.

B. Plant Pathology

For Advanced Undergraduates and Graduates

Bot. 121. Diseases of Special Crops (3)—First semester. Prerequisite, Bot. 20, or equivalent.

Offers more detailed information on the diseases of special crops than is given in Bot. 20.

Bot. 122. Research methods in Plant Pathology (2)—First and second semesters. Two laboratory periods a week. Prerequisite, Bot. 20, or equivalent.

Advanced training in the basic research techniques and methods of plant pathology. Laboratory fee, $5.00 each semester.

Bot. 128. Mycology (4)—First semester. Two lectures and two laboratory periods a week. Prerequisite, Bot. 2.

An introductory study of the morphology, classification, life histories, and economics of the fungi. Laboratory fee, $5.00.

For Graduates

Bot. 221. Virus Diseases (3)—Second semester. Two lectures and one laboratory period a week. Prerequisites, Bot. 20 and Bot. 101.

Consideration of the physical, chemical and physiological aspects of plant viruses and plant virus diseases. Laboratory fee, $5.00.

Bot. 225. Research, Pathology—Credit according to work done.

Bot. 226. Plant Disease Control (3)—First semester. Prerequisite, Bot. 20, or equivalent.

An advanced course dealing with the theory and practices of plant disease control.

Bot. 229. Seminar, Pathology (1)—First and second semesters.

Discussion on the advanced technical literature of plant pathology.

C. Plant Physiology

For Advanced Undergraduates and Graduates

Bot. 101. Plant Physiology (4)—First semester. Two lectures and two laboratory periods a week. Prerequisites, Bot. 1 and general chemistry.

A survey of the general physiological activities of plants. Laboratory fee, $5.00.

Bot. 102. Plant Ecology (3)—Second semester. Two lectures and one laboratory period a week. Prerequisite, Bot. 50, or equivalent.

A study of plants in relation to their environments. Plant successions and formations of North America are treated briefly and local examples studied.

For Graduates

Bot. 201. Plant Biochemistry (2 or 4)—First semester. Two lectures and two laboratory periods a week. Prerequisites, Bot. 101 and elementary organic chemistry, or equivalent.

A study of the important substances in the composition of the plant body and the chemical changes occurring therein. Laboratory fee, $5.00.

Bot. 202. Plant Biophysics (2)—(Not offered 1946-1947.) Prerequisites, Bot. 101 and introductory physics, or equivalent.

An advanced course dealing with the operation of physical phenomena in plant life processes.

Bot. 203. Biophysical Methods. (2)—(Not offered in 1946-1947). Two laboratory periods a week. Laboratory course to accompany Bot. 202. Laboratory fee, $5.00.

Bot. 204. Growth and Development (2)—(Not offered 1946-1947.) Prerequisite, 12 semester hours of plant science.

Bot. 205. Salt Nutrition Seminar (1)—Second semester.

Reports on current literature are presented and discussed in connection with recent advances in the mineral nutrition of plants.

Bot. 206. Research—Credit according to work done.

Students must be qualified to pursue with profit the research to be undertaken.

BUSINESS AND PUBLIC ADMINISTRATION

Accounting and Statistical Control, page 114.
Business Education, see page 140.
Economics, see page 120.
Financial Administration, see page 115.
Foreign Service and World Politics, see page 131.
Industrial Administration, see page 117.
Marketing Administration, see page 117.
Geography, see page 132.
Public Administration, see page 128.
Secretarial Training, see page 124.

B.A. 10, 11. Organization and Control (2,2)—First and second semesters. Required in all Bus. Adm. curriculums.

A survey course treating the internal and functional organization of a business enterprise. B.A. 11 includes industrial management, organization and control.

B.A. 20, 21. Principles of Accounting (4,4)—First and second semesters. Required in all Bus. Adm. curriculums.

The fundamental principles and problems involved in the accounting system; capital and surplus; bonds; and manufacturing and cost accounting.

For Advanced Undergraduates and Graduates

B.A. 120. Intermediate Accounting (5)—First semester. Prerequisite, B.A. 21.

A comprehensive study of the theory and problems of valuation of assets, corporation accounts and statements, consignment and installments, and the interpretation of accounting statements.

B.A. 121. Cost Accounting (4)—Second semester. Prerequisite, B.A. 21.

A study of the fundamental principles of cost accounting including job order, process, and standard cost accounting.

B.A. 122. Auditing Theory and Practice (4)—Second semester. Prerequisite, B.A. 120 and 121.

A study of the principles and problems of auditing and the application of accounting principles, to the preparation of audit working papers and reports.

B.A. 123. Income Tax Accounting (4)—First semester. Prerequisite, B.A. 120.

A study of the important provisions of the Federal Tax Law, using illustrative examples, selected questions and problems, the preparation of individual partnership, estate and trusts, and corporation returns.

B.A. 124. Advanced Accounting (4)—Second semester. Prerequisite, B.A. 120 and 121.

Advanced accounting theory applied to specialized problems in partnerships, estates and trusts, banks, mergers and consolidations, receivership and liquidations.

B.A. 125. C. P. A. Problems (3)—First semester. Prerequisite, consent of the instructor.

Designed to coordinate all previous work in accounting with special emphasis placed on the solution of problems typical of those presented in C. P. A. examinations.

B.A. 129. Apprenticeship in Accounting (0)—Prerequisites, minimum of 20 semester hours in accounting and the consent of the accounting staff.

A period of apprenticeship is provided with nationally known firms from about January 25 to February 15.

B.A. 130. Elements of Business Statistics (3)—First semester. Prerequisite, junior standing. Required for graduation.

This course is devoted to a study of the fundamentals of statistics. Emphasis is placed upon the collection of data; hand and machine tabulation; graphic charting; statistical distribution; averages; index numbers; sampling; elementary tests of reliability; and simple correlations.

B.A. 131. Statistics Laboratory. Laboratory hours and credit to be arranged. Prerequisite, B.A. 130. (By approval, open to graduate students for work on thesis.)

Through this course the Bureau of Business Research offers the student an opportunity to do practical work in statistics, business, and economics, under the direction of the Bureau staff.

B.A. 132, 133. Advanced Business Statistics (3, 3)—First and second semesters. Prerequisite, B.A. 130.

The use of statistical methods and techniques in economic studies and in the fields of business and public administration. During the latter part of the course advanced methods of correlation and other selected techniques are applied to statistical analyses of economic fluctuations, price changes, cost analysis, and market demand indexes and functions.

B.A. 140. Financial Management (3)—Second semester. Prerequisite, Econ. 140.

This course deals with principles and practices involved in the organization, financing, and reconstruction of corporations; the various types of securities and their use in raising funds, apportioning income, risk, and control; intercorporate relations; and new developments. Emphasis on solution of problems of financial policy faced by management.

B.A. 141. Investment Management (3)—First semester. Prerequisite, B.A. 140.

A study of the principles and methods used in the analysis, selection, and management of investments; investment programs, sources of investment information, security price movements, government, real estate, public utility, railroad, and industrial securities.

B.A. 142. Banking Policies and Practices (3)—Second semester. Prerequisite, Econ. 140.

A study of the organization and management of the commercial Bank, the operation of its departments, and the methods used in the extension of commercial credit.

B.A. 143. Credit Management (3)—Second semester. Prerequisite, B.A. 140.

A study of the nature of credit and the principles applicable to its extension for industrial, commercial, and consumer purposes; the organization and management of a credit department, and the collection of accounts.

B.A. 144. Life, Group, and Social Insurance (2)—First semester. Prerequisite, Econ. 32 or 37.

A study of the types of life insurance and the basic principles underlying all life insurance relating to reserves, investments, premiums, and regulations.

B.A. 145. Property, Casualty, and Liability Insurance (2)—First semester. Prerequisite, Econ. 32 or 37.

A survey of the insurance coverages written to protect business and personal risks arising from such hazards as fire, windstorm, ocean and inland transportation, fidelity, and liability.

B.A. 146. Real Estate Financing and Appraisals (2)—Second semester. Prerequisites, Econ. 32 or 37, B.A. 156.

A study of the methods used in financing real estate of all types—residential, industrial, and commercial. The fundamental problem of valuation will be studied from the viewpoint of the appraiser. Appraiser technique will be applied in the field.

B.A. 147. Business Cycles (3)—Second semester. Prerequisite, Econ. 140 and senior standing.

A study of the causes of depressions and unemployment, cyclical and secular instability, theories of business cycles, and the problem of controlling economic instability.

B.A. 150. Marketing Management (3)—Second semester. Prerequisite, Econ. 150.

A study of the work of the marketing division in a going organization. The work of developing organizations and procedures for the control of marketing activities are surveyed. The emphasis throughout the course is placed on the determination of policies, methods, and practices for the effective marketing of various forms of manufactured products.

B.A. 151. Advertising Programs and Campaigns (2)—First semester. Prerequisite, B.A. 150.

Deals with the fundamental principles of advertising. Covers the organization and carrying through of advertising campaigns and programs, the selection of ideas, types of appeal and different media, and the method of judging the effectiveness of advertising.

B.A. 152. Advertising Copy Writing and Layout (2)—Second semester. Prerequisite, B.A. 151.

Studies the practices and techniques of copy writing and layout that are useful for those who expect to prepare advertising or to direct the actual production of advertising. Covers the most essential principles of various kinds of copy writing. Surveys the process of production from the original idea to the published advertisement, and analyzes methods of testing its effectiveness.

B.A. 153. Purchasing Management (3)—Second semester. Prerequisite, B.A. 150.

Studies the problems of determining the proper sources, quality and quantity of supplies, and of methods of testing quality; price policies, price forecasting, forward buying bidding and negotiation; budgets and standards of achievement. Particular attention is given to government purchasing, the sources and supplies of war materials, and methods and procedures used in their procurement.

B.A. 151. Retail Store Management (3)—Second semester. Prerequisite, Econ. 150.

Retail store organization, location, layout and store policy; pricing policies, price lines, brands, credit policies, records as a guide to buying; purchasing methods; supervision of selling; training and supervision of retail sales force; and administrative problems.

B.A. 156. Real Estate Principles and Practice (2)—First semester. Prerequisite, Econ. 32 or 37.

The principles and practices involved in the acquisition and utilization of land and the improvements thereon.

B.A. 157. Foreign Trade Procedure (3). Prerequisite, B.A. 150.

Functions of various exporting agencies; documents and procedures used in exporting and importing transactions. Methods of procuring goods in foreign countries; financing of import shipments; clearing through the customs districts; and distribution of goods in the United States.

B.A. 160. Personnel Management (3)—Second semester. Prerequisite, Econ. 160.

This course deals essentially with functional and administrative relation ships between management and the labor force. It comprises a survey of the scientific selection of employees, "in-service" training, job analysis, classification and rating, motivation of employees, employee adjustment, wage incentives, employee discipline and techniques of supervision, elimination of employment hazards, etc.

B.A. 162. Contemporary Trends in Labor Relations (3)—First semeste. Prerequisite, B.A.160.

A study of contemporary trends in society's effort through legislation, mediation, and other methods to bring about a harmonious relationship between labor and management. State and Federal laws, and court decisions affecting labor relations are studied.

B.A. 163. Industrial Relations (3)—Second semester. Prerequisite, Econ. 160.

A study of the development and methods of organized groups in industry with reference to the settlement of labor disputes. An economic and legal analysis of labor union and employer association activities, arbitration, mediation, and conciliation; collective bargaining, trade agreements, strikes, boycotts, lockouts, company unions, employee representation, and injunctions.

B.A. 165. Office Management (3)—First semester. Prerequisite, B.A. 11 or junior standing.

Considers the application of the principles of scientific management in their application to office work.

B.A. 166. Business Communications (3)—Second semester. Prerequisite, junior standing.

The systems of communications used in modern business; techniques of communication forms, administrative memoranda, order, bulletin, digest, reports; communication problems in production, marketing, personnel administration, and public relations.

B.A. 170. Industrial Management (3)—Second semester. Prerequisites, B.A. 11 and 160.

Factory organization and management including plant layout and location, product design, personnel relations, wage setting, job analysis, production planning, etc.

B.A. 171. Transportation II (3). Prerequisite, P.A. 170.

Designed for students interested in the practical aspects of transportation; for example, shippers, traffic managers and regulators.

B.A. 172. Transportation III (3). Prerequisite, B.A. 171

This course treats the details of classification and rate construction for the inland transportation services.

B.A. 173. Transportation IV (3)—Overseas Shipping. Prerequisite, P.A. 170.

B.A. 180, 181. Business Law (4, 4)—First and second semesters. Prerequisite, senior standing. Required in all Bus. Adm. curriculums.

Legal aspects of business relationships, contracts, negotiable instruments, agency, partnerships, corporations, real and personal property, and sales.

B.A. 183. Law for Accountants (2). Prerequisite, B.A. 181.

Principles of law relating to the accounting profession, special emphasis being placed upon sections of the Maryland Annotated Code dealing with accountants, corporations, estates, and trusts.

B.A. 186. Real Estate Law and Conveyancing (2). Prerequisite, B.A. 156 and 181.

This course attempts to cover in a general way those phases of real property law which are of interest not only to real estate dealers but to all business men.

For Graduates

B. A. 220. Managerial Accounting (3).

B. A. 228. Research in Accounting—(Arranged.)

B. A. 229. Studies of Special Problems in the Fields of Control and Organization—(Arranged.)

B. A. 240. Seminar in Financial Management (1-3)—Prerequisites, Ec. 140, B. A. 21, B. A. 140.

B. A. 250 Problems in Sales Management (3).

B. A. 251—Problems in Advertising (3).

B. A. 252. Problems in Retail Store Management (3)—Second semester.

B. A. 257. Seminar in Marketing Management—(Arranged.)

B. A. 258. Research in Marketing—(Arranged.)

B. A. 262. Seminar in Contemporary Trends in Labor Relations—First semester.

B. A. 266. Research in Personnel Management—Second semester. (Arranged.)

B. A. 267. Research in Industrial Relations—(Arranged.)

B. A. 269. Studies in Special Problems in Employer-Employee Relationships—(Arranged.)

B. A. 299. Thesis—(Arranged.)

CHEMISTRY

Laboratory fees in Chemistry are $8.00 per semester with the exception of Chemistry 7 and 9. Demonstration fee in these courses is $3.00 per semester.

A. Analytical Chemistry

Chem. 15, 17. Qualitative Analysis (3, 3)—Two lectures and one three-hour laboratory period the first semester; one lecture and two three-hour laboratory periods the second semester. Prerequisite, Chem. 3.

Chem. 19. Quantitative Analysis (4)—First and second semesters. Two lectures and two three-hour laboratory periods per week. Prerequisite, Chem. 1, 3.

Chem. 21, 23. Quantitative Analysis (4, 4)—First and second semesters. Two lectures and two three-hour laboratory periods per week. Prerequisite, Chem. 15, 17.

This course includes a study of the principal operations of gravimetric and volumetric analysis. Required of all students majoring in Chemistry.

Chem. 121, 123. Chemical Microscopy (2, 2)—First and second semesters. One lecture and one three-hour laboratory period per week. Chem. 121 is a prerequisite of Chem. 123.

A course designed to acquaint the student with the fundamentals of microscopic analysis and with the use of the polarizing microscope.

Chem. 166, 167. Food Analysis (3, 3)—First and second semesters. One lecture and two three-hour laboratory periods per week. Prerequisites, Chem. 19, 31, 32, 33, 34.

Chem. 221, 223. Chemical Microscopy (2, 2)—First and second semesters. One lecture and one three-hour laboratory period per week. Chem. 221 is a prerequisite for Chem. 223.

An advanced study of the principles of microscopic analysis. Chem. 223 is devoted to the study of the optical properties of crystals.

Chem. 226, 228. Problems in Quantitative Analysis (2, 2)—First and second semesters. Two three-hour laboratory periods per week. Prerequisite, consent of instructor.

A study of some special problem chosen to meet the needs of the individual.

Chem. 266. Biological Analysis (2)—Second semester. Two three-hour laboratory periods per week. Prerequisites, Chem. 19, 31, 32, 33, 34.

B. Biochemistry

Chem. 41. The Chemistry of Textiles (4)—Second semester. Two lectures and two three-hour laboratory periods per week. Prerequisites, Chem. 31, 32, 33, 34.

A chemical study of the principal textile fibers.

Chem. 81. General Biochemistry (2)—First semester. Two lectures per week. Prerequisites, Chem. 31, 32, 33, 34, or Chem. 35, 36, 37, 38.

This course is designed primarily for students in home economics. Chem. 82 MUST be taken concurrently.

Chem. 82. General Biochemistry Laboratory (2)—First semester. Two three-hour laboratory periods per week. Prerequisites, Chem. 32, 34, or Chem. 36, 38.

A course designed to accompany Chem. 81.

Chem. 161, 163. Biochemistry (2, 2)—First and second semesters. Two lectures per week. Prerequisites, Chem. 31, 33, or Chem. 35, 37.

This course is designed primarily for students in agriculture, bacteriology, or chemistry, and for those students in home economics who need a more extensive course of biochemistry than is offered in Chem. 81, 82.

Chem. 162, 164. Biochemistry Laboratory (2, 2)—First and second semesters. Two three-hour laboratory periods per week. Prerequisites, Chem. 32, 34, or Chem. 36, 38.

Chem. 261, 263. Advanced Biochemistry (2, 2)—First and second semesters. Two lectures per week. Prerequisites, Chem. 141, 143, or consent of the instructor. (Not offered 1946-1947.)

Chem. 262, 264. Advanced Biochemistry Laboratory (2, 2)—First and second semesters. Two three-hour laboratory periods per week. Prerequisite, consent of the instructor. (Not offered 1946-1947.)

Chem. 268. Special Problems in Biochemistry (2-4)—First and second semesters. Two to four three-hour laboratory periods per week. Prerequisites, Chem. 161, 162, and consent of the instructor.

C. Inorganic and General Chemistry

Chem. 1, 3. General Chemistry (4, 4)—First and second semesters. Two lectures and two three-hour laboratory periods per week.

Chem. 5. Introductory Qualitative Analysis (3)—Second semester. One lecture and two three-hour laboratory periods per week. Prerequisite, Chem. 3.

Chem. 7, 9. Introductory Chemistry (3, 3)—First and second semesters. Three lectures, one quiz section per week.

A course designed for students desiring only a superficial knowledge of chemistry; this course is not accepted as a prerequisite for more advanced courses.

Chem. 11, 13. General Chemistry (3, 3)—Two lectures and one three-hour laboratory period per week.

An abbreviated course in general chemistry especially designed for students in home economics.

Chem. 101. Advanced Inorganic Chemistry (2)—Second semester. Two lectures per week. Prerequisite, Chem. 23, 37, 38.

Chem. 201, 203. The Chemistry of the Rarer Elements (2, 2)—First and second semesters. Two lectures per week.

Chem. 202, 204. Advanced Inorganic Laboratory (2, 2)—First and second semesters. Two three-hour laboratory periods per week.

Chem. 206. An Introduction to Spectrographic Analysis (1)—First and second semesters. One three-hour laboratory period per week.

D. Organic Chemistry

Chem. 31, 33. Elements of Organic Chemistry (2, 2)—First and second semesters. Two lectures per week. Prerequisites, Chem. 1, 3.

Organic chemistry for students in agriculture, bacteriology and home economics.

Chem. 32, 34. Elements of Organic Laboratory (1, 1)—First and second semesters. One three-hour laboratory period per week.

A course designed to accompany Chem. 31, 33.

Chem. 35, 37. Elementary Organic Chemistry (2, 2)—First and second semesters. Two lectures per week. Prerequisites, Chem. 1, 3.

A course for chemists, chemical engineers, and premedical students.

Chem. 36, 38. Elementary Organic Laboratory (2, 2)—First and second semesters. Two three-hour laboratory periods per week. Prerequisites, Chem. 35, 37, or concurrent registration therein.

Chem. 141, 143. Advanced Organic Chemistry (2, 2)—First and second semesters. Two lectures per week. Prerequisites, Chem. 37, 38.

An advanced study of the compounds of carbon.

Chem. 142, 144. Advanced Organic Laboratory (2, 2)—First and second semesters. Two three-hour laboratory periods per week. Prerequisites, Chem 19 or 23, and Chem. 37, 38.

Syntheses and the quantitative determination of carbon and hydrogen, halogen, and nitrogen are studied.

Chem. 146, 148. The Identification of Organic Compounds (2, 2)—First and second semesters. Two three-hour laboratory periods per week. Prerequisites, Chem. 141, 143, or concurrent registration therein.

The systematic identification of organic compounds.

(One course from the following group 241-257 will customarily be offered each semester. Two of these courses will be presented in the academic year 1946-1947.)

Chem. 241. Stereochemistry (2)—Two lectures per week.

Chem. 243. The Polyene Pigments and Certain Vitamins (2)—Two lectures per week.

Chem. 245. The Chemistry of the Steroids (2)—Two lectures per week.

Chem. 247. The Chemistry of Nitrogen Compounds (2)—Two lectures per week.

Chem. 249. Physical Aspects of Organic Chemistry (2)—Two lectures per week.

Chem. 251. The Heterocycles (2)—Two lectures per week.

Chem. 254. Advanced Organic Preparations (2 to 4)—First and second semesters. Two to four three-hour laboratory periods per week.

Chem. 255. The Chemistry of Therapeutic Agents (2)—Two lectures per week.

Chem. 257. Organic Laboratory Methods (2)—Two lectures per week.

The theory and application of the laboratory methods of organic chemistry.

Chem. 258. The Identification of Organic Compounds, an Advanced Course (2 to 4)—First and second semesters. Two to four three-hour laboratory periods per week.

Chem. 260. Advanced Organic Laboratory (1 or 2)—First and second semesters. One or two three-hour laboratory periods per week.

An orientation course designed to demonstrate a new student's fitness to begin research in organic chemistry.

E. Physical Chemistry

Chem. 181, 183. Elements of Physical Chemistry (2, 2)—First and second semesters. Two lectures per week. Prerequisites, Chem. 1, 3; Phys. 1, 2; Math. 10, 11.

A course intended primarily for premedical students and students in the biological sciences. This course must be accompanied by Chem. 182, 184.

Chem. 182, 184. Elements of Physical Chemistry Laboratory (1, 1)—First and second semesters. One three-hour laboratory period per week. May be taken ONLY when accompanied by Chem. 181, 183.

The course includes quantitative experiments illustrating the principles studied in Chem. 181, 183.

Chem. 187, 189. Physical Chemistry (3, 3)—First and second semesters. Three lectures per week. Prerequisites, Chem. 21, 23; Phys. 20, 21; Math. 20, 21.

A course primarily for chemists and chemical engineers.

Chem. 188, 190. Physical Chemistry Laboratory (2, 2)—First and second semesters. Two three-hour laboratory periods per week.

A laboratory course for students taking Chem. 187, 189.

The common prerequisites for the following courses are Chem. 187, 189, and Chem. 188, 190, or their equivalent.

Chem. 281, 283. Theory of Solutions (2, 2)—First and second semesters. Two lectures per week. Prerequisite, Chem. 307. (Not given in 1946-1947.)

Chem. 285. Colloid Chemistry (2)—First semester. Two lectures per week.

Chem. 289. Quantum Mechanics (2)—Two lectures per week. Prerequisite, Chem. 307. (Not given in 1946-1947.)

Chem. 291. Statistical Mechanics (2)—Two lectures per week. (Not given in 1946-1947.)

Chem. 295. Heterogenous Equilibria (2)—Second semester. Two lectures per week.

Chem. 299. Reaction Kinetics (3)—Second semester. Three lectures per week.

Chem. 303. Electrochemistry (3)—Second semester. Three lectures per week. (Not given in 1946-1947.)

Chem. 304. Electrochemistry Laboratory (2)—Second semester. Two three-hour laboratory periods per week. Prerequisite, consent of the instructor. (Not given in 1946-1947.)

Chem. 307. Chemical Thermodynamics (3)—First semester. Three lectures per week.

Chem. 351. Seminar (1)—First and second semesters.

Chem. 360. Research—First and second semesters, summer session.

CHEMICAL ENGINEERING

Chem. E. 10. Water, Fuels and Lubricants (4)—Second semester. Two lectures and two laboratory periods a week. Prerequisites, Chem. 19; Phys. 20, 21, or permission of instructor.

Laboratory work consists of exercises in the usual control methods for testing water, fuels, and lubricants, and some related engineering materials. Laboratory fee, $8.00 per semester.

For Advanced Undergraduates and Graduates

Chem. E. 103 f, s. Elements of Chemical Engineering (3, 3)—Three hours a week. Prerequisites, Chem. 1, 3; Phys. 20, 21.

Theoretical discussion of underlying philosophy and methods in chemical engineering and elementary treatment of important operations involving fluid flow, heat flow, evaporation, humidity and air conditioning, distillation, and absorption. Illustrated by problems and consideration of typical processes.

Chem. E. 104 f, s. Chemical Engineering Seminar (1, 1)—One hour a week.

Students prepare reports on current problems in chemical engineering and participate in the discussion of such reports.

Chem. E. 105 f, s. Advanced Unit Operations (5, 5)—Two lectures and one all-day laboratory period a week. Prerequisites, Chem. E. 103; Chem. 187, 188, 189, 190.

Advanced theoretical treatment of basic chemical engineering operations. Study and laboratory operation of small scale semi-commercial type equipment. A comprehensive problem involving theory and laboratory operations is included to illustrate the development of a plant design requiring the utilization of a number of fundamental topics. Laboratory fee $8.00 per semester.

Chem. E. 106, f, s. Minor Problems (6, 6)—Six hours a week, both semesters. Prerequisites, Chem. E. 105, f, s, or simultaneous registration therein.

Original work on a special problem assigned each student, including the preparation of a complete report covering the study.

Chem. E. 107. Fuels and Their Utilization (3)—First semester. Three hours a week. Prerequisites, Chem. E. 103, or permission of Department of Chemical Engineering.

A study of the sources of solid, liquid, and gaseous fuels, their economic conversion, distribution, and utilization. Problems.

Chem. E. 108 f, s. Chemical Technology (2, 2)—Two hours a week. Prerequisites, Chem. E. 103, or simultaneous registration therein, or permission of the Department of Chemical Engineering.

A study of the principal chemical industries. Plant inspections, trips, reports, and problems.

Chem. E. 109 f, s. Chemical Engineering Thermodynamics (2, 2)—Two hours a week. Prerequisites, Chem. 187, 188, 189, 190; Chem. E. 103, or permission of instructor.

A study of the application of the principles of engineering and chemical thermodynamics to some industrial problems encountered in the practice of chemical engineering.

Chem. E. 110. Advanced Chemical Engineering Calculations (3)—First semester. Three hours a week. Prerequisites, Math. 20, 21; Chem. E. 103.

A study of methods for analyzing chemical engineering problems along quantitative and mathematical lines, with the calculus and other mathematical aids. Emphasis is placed on graphical presentation and the engineering utility of the results.

For Graduates

Chem. E. 201, f, s. Graduate Unit Operations and Processes (5, 5 or more)—One hour conference, three or more laboratory periods a week. Prerequisite, permission of the Department of Chemical Engineering.

Advanced theoretical treatment of typical unit operations and processes in chemical engineering. Problems. Laboratory operation of small scale semi-commercial units and processes with supplemental reading, conferences and reports.

Laboratory fee $8.00 per semester.

Chem. E. 202. Gas Analysis (3)—One lecture and two laboratory periods a week. One semester. Prerequisite, permission of Department of Chemical Engineering.

Quantitative determination of common gases, fuel gases, gaseous vapors, and important gaseous impurities. Problems.

Laboratory fee $8.00 per semester.

Chem. E. 203. Graduate Seminar (1)—One hour a week. Required of all graduate students in Chemical Engineering.

The content of this course is constantly changing so a student may receive a number of credits by re-registration.

Students prepare reports on current problems in chemical engineering and participate in the discussion of such reports.

Chem. E. 205. Research in Chemical Engineering—Credit hours to be arranged.

The investigation of special problems and the preparation of a thesis in partial fulfillment of the requirements of an advanced degree.

Laboratory fee $8.00 per semester.

Chem. E. 207 f, s. Plant Design Studies (3, 3)—Three conference hours a week. Prerequisite, permission of Department of Chemical Engineering.

Chem. E. 209 f, s. Plant Design Studies Laboratory (3, 3)—Three laboratory periods a week. Prerequisite, permission of Department of Chemical Engineering.

Laboratory fee $8.00 per semester.

Chem. E. 210 f, s. Gaseous Fuels (2, 2)—Two hours a week. Prerequisite, permission of Department of Chemical Engineering.

An advanced treatment of some of the underlying scientific principles involved in the production, transmission and utilization of gaseous fuels. Problem in design and selection of equipment.

CIVIL ENGINEERING

For Advanced Undergraduates

C. E. 50. Hydraulics (3)—Second semester. Three lectures and one laboratory period a week. Prerequisite, Mech. 50. Required of juniors in civil engineering.

Hydrostatic pressures on tanks, dams, and pipes. Flow through orifices, nozzles, pipe lines, open channels, and weirs. Use of Reynold's number. Measurement of water. Elementary hydrodynamics.

C. E. 51. Curves and Earthwork (3)—First semester. One lecture and two laboratory periods a week. Prerequisites, Surv. 1, 2 and concurrent registration in Surv. 100.

Computation and field work for simple, compound, and reversed circular curves and spirals; parabolic curves; earthwork computations; complete survey and map, including mass diagram, of a short route.

For Advanced Undergraduates and Graduates

C. E. 100. Theory of Structures (4)—Second semester. Three lectures and one laboratory period a week. Prerequisite, Mech. 50.

Analytic and graphical determination of dead and live load stresses in beams and framed structures; influence lines; lateral bracing and portals; elements of slope and deflection.

C. E. 101. Elements of Highways (3)—First semester. Two lectures and one laboratory period a week. Prerequisite, Mech. 50.

Location, design, construction, and maintenance of roads and pavements. Laboratory problems and field inspection trips.

C. E. 102. Structural Design (6)—First semester. Four lectures and two laboratory periods a week. Prerequisite, C. E. 100.

Design and detailing of wood and structural steel members and their connections; wind stresses in building frames; structural frameworks.

C. E. 103. Concrete Design (6)—Second semester. Four lectures and two laboratory periods a week. Prerequisite, C. E. 100.

Design and detailing of plain and reinforced concrete structures, applications of slope-deflection and moment distribution theories; rigid frames.

C. E. 104. Water Supply (3)—First semester. Two lectures and one laboratory period a week. Prerequisite, C. E. 50.

Requirements of a municipal water supply—design, operation, maintenance, and administration.

C. E. 105. Sewerage (3)—Second semester. Two lectures and one laboratory period a week. Prerequisite, C. E. 50.

The collection, treatment and disposal of sewage.

C. E. 106. Soil Mechanics (3)—Second semester. Two lectures and one laboratory period a week. Prerequisite, Mech. 50.

An introductory study of the properties and behavior of soils as engineering materials. Soil physics, soil mechanics, and applications to engineering.

For Graduates

C. E. 200. Advanced Properties of Materials (3)—First or second semester. Prerequisite, Mech. 52 or equivalent.

A critical study of elastic and plastic properties, flow of materials, resistance to failure by fracture, impact, and corrosion, the theories of failure. Assigned reading from current literature.

C. E. 201. Advanced Strength of Materials (3)—First or second semester. Prerequisite, Mech. 50, 51, or equivalent.

Special problems in engineering stress analysis. Limitations of flexure and torsion formulas, unsymmetrical bending, curved beams, combined stresses, thin tubes, thick-walled cylinders and flat plates.

C. E. 202. Applied Elasticity (3)—First or second semester. Prerequisite, Math. 64 or equivalent.

Two dimensional elastic problems, general stress-strain analysis in three dimensions, stability of beams, columns, and thin plates.

C. E. 203. Soil Mechanics (3)—First or second semester. Prerequisite, C. E. 106 or equivalent.

A detailed study of the properties of engineering soils. Assigned reading from current literature.

C. E. 204. Advanced Foundations (3)—First or second semester. Prerequisite, C. E. 102, 103, 106 or equivalent.

A detailed study of types of foundations. Design and construction to meet varying soil conditions.

C. E. 205. Highway Engineering (3)—First or second semester. Prerequisite, C. E. 101 or equivalent.

An intensive course in the location, design, and construction of highways.

C. E. 206. Theory of Concrete Mixtures (3, 3)—First and second semesters. Prerequisite, Mech. 52 or equivalent.

A thorough review of the methods for the design of concrete mixtures, followed by a study of factors affecting the properties of the resulting concrete. This course is intended as a background for work in the field of concrete, concrete aggregates, or reinforced concrete.

C. E. 207. **Advanced Structures (4)**—First or second semester. Three lectures and one laboratory period a week. Prerequisites, C. E. 102, 103.

The solution of statically indeterminate structures by classical and modern methods, with emphasis on the latter.

C. E. 208. **Research**—Credit in accordance with work done. First and second semesters.

CLOTHING AND TEXTILES, see page 267.

COMMERCE, see BUSINESS ADMINISTRATION, page 227.

COMPARATIVE LITERATURE

Requirements for major include Comparative Literature 101, 102. Comparative Literature courses can be counted toward a major or minor in English when recommended by the student's major adviser.

Comp. Lit. 1. **Greek Poetry (2)**—First semester.

Homer's *Iliad* and *Odyssey* with special emphasis on the literary form and the historical and mythological background.

Comp. Lit. 2. **Later European Epic Poetry (2)**—Second semester.

Virgil's *Aeneid*, Dante's *Divine Comedy*, *Nibelungenlied*, *Song of Roland*, and other European epics, with special emphasis on their relationship to and comparison with the Greek epic.

For Advanced Undergraduates and Graduates

Comp. Lit. 101. **Introductory Survey of Comparative Literature (3)**—First semester.

Survey of the background of European literature through study of English translations of Greek and Latin literature. The debt of modern literature to the ancients is discussed and illustrated.

Comp. Lit. 102. **Introductory Survey of Comparative Literature (3)**—Second semester.

Continuation of Comp. Lit. 101; study of medieval and modern Continental literature.

Comp. Lit. 103. **The Old Testament as Literature (2)**—First semester.

A study of the sources, development, and literary types.

Comp. Lit. 104. **Chaucer (3)**—First semester.

Same as Eng. 104.

Comp. Lit. 105. **Romanticism in France (3)**—First semester.

Lectures and readings in the French romantic writers from Rousseau to Baudelaire. Texts are read in English translations.

Comp. Lit. 106. Romanticism in Germany (3)—Second semester.

Continuation of Comp. Lit. 105. German literature from Buerger to Heine in English translations.

Comp. Lit. 107. The Faust Legend in English and German Literature (3)—First semester.

A study of the Faust legend of the Middle Ages and its later treatment by Marlowe in *Dr. Faustus* and by Goethe in *Faust*.

Comp. Lit. 108. Some Non-English Influences on American Literature (3)—Second semester.

Comparative study of European, chiefly French and German, and American writers, illustrating our literary debt to the Old World and original features of the New.

Comp. Lit. 109. Cervantes (3)—Second semester.

Same as Spanish 109.

Comp. Lit. 112. Ibsen (2)—First semester.

A study of the life and chief works of Ibsen with special emphasis on his influence on the modern drama.

Comp. Lit. 113. Prose of the Renaissance (3)—Second semester.

Same as Eng. 113.

Comp. Lit. 114. The Greek Drama (3)—First semester.

The chief works of Aeschylus, Sophocles, Euripides, and Aristophanes in English translations. Emphasis on the historic background, on dramatic structure, and on the effect of the Attic drama upon the mind of the civilized world.

Comp. Lit. 121. Milton (3)—(Not offered 1945-46.)

Same as Eng. 121.

Comp. Lit. 129, 130. Literature of the Romantic Period (3, 3)—First and second semesters.

Same as Eng. 129, 130.

Comp. Lit. 144. Modern Drama (3)—First semester.

Same as Eng. 144.

Comp. Lit. 145. The Modern Novel (3)—Second semester.

Same as Eng. 145.

Comp. Lit. 155, 156. Four Major American Writers (3, 3)—First and second semesters.

Same as Eng. 155, 156.

For Graduates

Comp. Lit. 201. Bibliography and Methods (3)—First semester.

Same as Eng. 201.

Comp. Lit. 202. The History of the Theater (3)—Second semester. Prerequisite, a wide acquaintance with modern drama and some knowledge of the Greek Drama.

A detailed study of the history of the European theater. Individual research problems will be assigned for term papers.

Comp. Lit. 203. Schiller (3)—First semester.

Same as German 204.

Comp. Lit. 204. Medieval Romances (3)—First semester. (Not offered in 1945-46.)

Same as Eng. 204.

Comp. Lit. 205, as by Georges Duhamel. Poet, Dramatist, Novelist (2, 2)

First and second semesters.

Same as French 203, 204.

Comp. Lit. 206, 207. Seminar in Sixteenth Century Literature (3, 3)—First and second semesters.

Same as Eng. 206, 207.

Comp. Lit. 208. The Philosophy of Goethe's Faust (3)—First semester.

Same as German 208.

Comp. Lit. 216, 217. Literary Criticism (3, 3)—First and second semester. (Not offered 1945-46.)

Same as Eng. 216, 217.

Comp. Lit. 227, 228. Problems in American Literature (3, 3)—First and second semesters.

Same as Eng. 227, 228.

DAIRY HUSBANDRY

D. H. 1. Fundamentals of Dairying (3)—Second semester. Two lectures and one laboratory period a week.

This course is designed to cover the entire field of dairy husbandry. The content of the course deals with all phases of dairy cattle feeding, breeding and management and the manufacturing, processing, distributing and marketing of dairy products. Laboratory fees, $3.00.

D. H. 30. Dairy Cattle Judging (2)—Second semester. Two laboratory periods a week. Not open to freshmen.

This course offers complete instruction in the selection and comparative judging of dairy cattle. Trips to various dairy farms for judging practice will be made.

D. H. 40. Grading Dairy Products (2)—Second semester. Two laboratory periods a week.

Market grades and the judging of milk, butter, cheese, and ice cream. Laboratory fee, $3.00.

For Advanced Undergraduates

D. H. 50. Dairy Cattle Management (1)—First semester. One laboratory period a week. Prerequisite, D. H. 1.

A management course designed to familiarize students with the practical handling and management of dairy cattle. Students are given actual practice and training in the University dairy barns.

For Advanced Undergraduates and Graduates

D. H. 101. Dairy Production (3)—Second semester. Two lectures and one laboratory period a week. Prerequisites, D. H. 1, A. H. 52.

A comprehensive course in dairy cattle feeding, breeding and herd management, designed for advanced students in dairy husbandry.

D. H. 102. Dairy Technology (4)—First semester. Two lectures and two laboratory periods a week. Prerequisites, D. H. 1, Bact. 101, Chem. 1, 3, 31, 33, 32, 34.

Composition standards for milk and milk products, critical interpretation and application of the Babcock and other practical factory methods of analyses for fat; moisture determinations; quality tests. Laboratory fee, $3.00.

D. H. 105. Dairy Breeds and Breeding (2)—First semester. Prerequisites, D. H. 1, Zool. 104, A. H. 103.

A study of the historical background; characteristics; prominent blood lines; noted families and individuals of the major dairy breeds. A survey of breeding systems; genetic and environmental factors as applied to dairy cattle. The use of the pedigree, various indices, herd and production records in selection and formulating breeding programs.

D. H. 110. Butter and Cheese Making (4)—First semester. Two lectures and two laboratory periods a week. Prerequisites, D. H. 1, Bact. 1, Chem. 1, 3.

Commercial methods of manufacturing butter and cheese. Consideration is given to the physical, chemical, and biological factors involved; procedures of manufacture; quality control. Laboratory fee, $3.00.

D. H. 111. Concentrated Milk Products (2)—Second semester. One lecture and one laboratory period a week. Prerequisites, D. H. 1, 102, 114.

Theories and practice of manufacturing condensed and evaporated milk and milk powder; plant processes; quality factors; utilization. Laboratory fee, $3.00.

D. H. 112. Ice Cream Making (4)—First semester. Two lectures and two laboratory periods a week. Prerequisites, D. H. 1, 102, 114.

The ice cream industry; commercial methods of manufacturing ice cream; fundamental principles; ingredients; controlling quality. Laboratory fee, $3.00.

D. H. 113. Market Milk (4)—Second semester. Two lectures and two laboratory periods a week. Prerequisites, D. H. 1, Bact. 1, 101, Chem. 1, 3.

Commercial aspects of the market milk industry relating to transportation, processing, and distribution; operation of a market milk plant; quality problems; chocolate milk, buttermilk and cottage cheese. Laboratory fee, $3.00.

D. H. 114. Special Laboratory Methods (3)—First semester. One lecture and two laboratory periods a week. Prerequisites, D. H. 1, 102, Bact. 1, 101, Chem. 1, 3, 19.

Application of chemical and bacteriological methods used in control and research work to milk, milk products and milk constituents; the Mojonnier Method for fat and solids; tests for sterilizing and cleaning. Laboratory fee, $3.00.

D. H. 115. Dairy Inspection (2)—First semester. One lecture and one laboratory period a week. Prerequisites, D. H. 1, 113.

Study and interpretation of dairy ordinances and standards; application to farm and plant inspection.

D. H. 116. Dairy Plant Management (4)—Second semester. Two lectures and two laboratory periods a week. Prerequisites, at least three advanced dairy manufacturing courses.

Principles of dairy plant management, record systems; personnel, plant design and construction; dairy machinery and equipment.

D. H. 120, 121. Dairy Seminar (1, 1)—First and second semester. Prerequisites, students majoring in dairy production D. H. 1, 101; students majoring in dairy manufacturing D. H. 1, 102.

Presentation and discussion of current literature and research work in dairying.

D. H. 124. Methods of Dairy Research (2-4)—Second semester. Prerequisites, students majoring in dairy production, D. H. 1, 101; students majoring in dairy manufacturing, D. H. 1, 102, 113. Credit in accordance with the amount and character of work done.

This course is designed especially to meet the needs of those dairy students who plan to enter the research or technical field of dairying. Methods of conducting dairy research and the presentation of results are stressed. A research problem which relates specifically to the work the student is pursuing will be assigned.

For Graduates

D. H. 201. Advanced Dairy Production (3)—First semester. Prerequisite, D. H. 101 or equivalent.

A study of the newer discoveries in animal nutrition, breeding, and management. Readings and assignments.

D. H. 202. Advanced Dairy Technology (3)—Second semester. Prerequisite, D. H. 102, 114 or equivalent.

Milk and milk products from physico-chemical and biological chemical points of view, with attention directed to hydrogen ion concentration, electrometric titration, oxidation-reduction, electrometric conductivity, buffer system of milk, milk enzymes.

D. H. 204. Special Problems in Dairying (2-5)—First and second semesters. Prerequisite, permission of Professor in charge of work. Credit in accordance with the amount and character of work done.

Special problems which relate specifically to the work the student is pursuing will be assigned.

D. H. 205. Seminar (1, 1)—First and second semesters.

Students are required to prepare reports on current literature in dairy husbandry and allied fields. These reports are presented and discussed in the class.

D. H. 208. Research (3-8)—First and second semesters. Credit to be determined by the amount and quality of work done.

The student will be required to pursue, with the approval of the Head of the Department, an original investigation in some phase of dairy husbandry, carrying the same to completion, and report results in the form of a thesis.

DRAWING

Dr. 1, 2. Engineering Drawing (2, 2)—First and second semesters. Two laboratory periods a week.

Lettering, use of instruments, orthographic projection as applied to the solution of space problems relating to the point, line, and plane. Intersections and developments. Auxiliary planes, revolutions, sections, and screw threads. Pictorial representation. Dimensioning.

Dr. 3. Advanced Engineering Drawing (2)—First semester. Two laboratory periods a week. Required of sopohomores in aeronautical, in civil and in mechanical engineering. Prerequisite, Dr. 1, 2.

Continuation of Dr. 1, 2. Technical sketching, transitions, fastenings, working drawings and perspective. Applications to practical drafting problems in the student's professional field.

Dr. 4, 5. Mechanical Drawing (1, 1)—First and second semesters. One laboratory period a week. Open to non-engineering students.

Lettering, sketching, and working drawings of machines; including conventions, tracing, isometric and cabinet projections, and blueprinting.

ECONOMICS

Econ. 1, 2. Economic Resources (2, 2)—First and second semesters. One lecture and one 2-hour laboratory period a week for Econ. 1. Freshman requirement in the Business Administration Curriculi.

General comparative study of the geographic factor underlying production economics. Emphasis upon climate, soils, landforms, agricultural products, power resources, and major metallic minerals, concluding with brief survey of geography of commerce and manufacturing.

Econ. 4, 5. Economic Developments (2, 2)—First and second semesters. Freshman requirements in Business Administration Curriculums.

An introduction to modern economic institutions—their origins, development, and present status. Commercial revolution, industrial revolution, and age of mass production. Emphasis on developments in England, Western Europe and the United States.

Econ. 31, 32. Principles of Economics (3, 3)—First and second semesters. Prerequisite, sopohomore standing. Required in the Business Administration Curriculums.

A general analysis of the functioning of the economic system. A considerable portion of the course is devoted to a study of basic concepts and explanatory principles. The remainder deals with the major problems of the economic system.

Econ. 37. Fundamentals of Economics (3)—First and second semesters. Not open to students who have credit in Econ. 31, and 32. Not open to freshmen.

A survey study of the general principles underlying economic activity. Designed to meet the needs of special technical groups such as students of Engineering, Home Economics, Agriculture and others who are unable to take the more complete course provided in Economics 31 and 32.

For Advanced Undergraduates and Graduates

Econ. 130. Economics of Consumption (3)—Second semester. Prerequisite, Econ. 32 or 37.

The place of the consumer in our economic system. An analysis of demand for consumer goods. The need for consumer consciousness and a technique of consumption. Cooperative and governmental agencies for consumers. Special problems.

Econ. 131. Comparative Economic Systems (3)—Second semester. Prerequisite, Econ. 32 or 37.

An investigation of the theory and practice of various types of economic systems. The course begins with an examination and evaluation of the capitalistic system, and is followed by an analysis of alternative types of economic systems such as fascism, socialism, and communism.

Econ. 132. Advanced Economic Principles (3)—First semester. Prerequisite, Econ. 32.

This course is an analysis of price and distribution theory with special attention being paid to recent developments in the theory of imperfect competition.

Econ. 134. Contemporary Economic Thought (3)—Second semester. Prerequisite, Econ. 32.

A survey of recent trends in American, English, and Continental Economic thought with special attention being given to the work of such economists as W. C. Mitchell, J. R. Commons, T. Veblen, W. Sombart, J. A. Hobson and other contributors to the development of economic thought since 1900.

Econ. 135. Economic Institutions and War (3)—First semester. Prerequisite, Econ. 32 or 37.

An analysis of the economic causes and problems of war. Industrial mobilization, theory and techniques of price control; war finance, international trade and foreign exchange controls; and the problems of readjustment in a post-war economy.

Econ. 140. Money and Banking (3)—First semester. Prerequisite, Econ. 32 or 37.

A study of the nature, functions, and operations of our financial organization, money and credit, commercial banking, domestic and foreign exchange, federal reserve system, non-commercial banking institutions, and recent financial developments.

Econ. 141. Theory of Money, Credit, and Prices (3)—Second semester. Prerequisites, Econ. 32 and 140.

A study of recent developments in the theory of money and credit, of domestic and international price problems, and of monetary and credit policies in their relation to the problem of full employment.

Econ. 150. Marketing Principles and Organization (3)—First semester. Prerequisite, Econ. 32 or 37.

This is an introductory course in the field of marketing. Its purpose is to give a general understanding and appreciation of the forces operating, institutions employed, and methods followed in marketing agricultural products, natural products, services, and manufactured goods.

Econ. 151. Economics of Cooperatives (2)—Second semester. Prerequisite, Econ. 32 or 37.

Analysis of and contrast between economic problems and contributions of cooperative and other types of business organizations; the significance of cooperation in the free enterprise system. Nominal fees are collected to cover the expense of occasional field trips.

Econ. 160. Labor Economics (3)—First semester. Prerequisite, Econ. 32 or 37.

The historical development and chief characteristics of the American labor movement are first surveyed. Present day problems are then examined in detail: wage theories, unemployment, social security, labor organization, collective bargaining.

Econ. 170. Monopoly and Competition (3)—Second semester. Prerequisite, Econ. 32 or 37.

Growth of large-scale production, development of industrial combinations, the economies of vertical and horizontal combination, the anti-trust acts, and some conclusions as to policy in relation to competition and monopoly. Problems of small business.

Econ. 171. Economics of American Industry (3)—Second semester. Prerequisite, Econ. 32 or 37.

A study of the technology, economics and geography of twenty representative American industries.

For Graduates

Econ. 230. History of Economic Thought (3)—First semester. Prerequisite, Econ. 132.

A study of the development of economic thought and theories including the Greeks, Romans, canonists, mercantilists, physiocrats, Adam Smith, Malthus, Ricardo. Relation of ideas to economic policy.

Econ. 231. Economic Theory in the Nineteenth Century (3)—Second semester. Prerequisite, Econ. 230 or consent of the instructor.

A study of various nineteenth and twentieth century schools of economic thought, particularly the classicists, neo-classicists, Austrians, German historical school, American economic thought, and the socialists.

Econ. 237, 238. Seminar in Economic Investigation (3,3)—First and second semesters.

Econ. 240. Comparative Banking Systems (3)—Second semester.

Econ. 270. Seminar in Economics and Geography of American Industries (3)—arranged.

Econ. 299. Thesis—arranged.

ECONOMIC GEOGRAPHY, see page 288.

EDUCATION

Academic Education, see page 136.
Agricultural Education, see pages 57, 213.
Art Education, see page 139.
Business Education, see page 140.
Home Economics Education, see pages 144, 258.
Industrial Education, see pages 146, 259.
Nursery School Education, see page 145.
Physical Education for Men, see pages 188, 265.
Physical Education for Women, see pages 193, 267.

Courses Primarily for Freshmen and Sophomores

Ed. 2. Introduction to Education (2)—First and second semesters. Required of freshmen in Education and recommended for other freshmen who are interested in teaching. Not open to upper classmen.

An exploratory or guidance course designed to help students choose wisely in their preparation for the teaching profession. Types of positions, teacher supply and demand, favorable and unfavorable aspects of teaching, and types of personal and professional competence required of teachers are among the topics included. The testing and observational program of the College of Education is begun in this course. Fee, $1.00.

Ed. 3. Educational Forum (1)—First and second semesters. Required of sophomores in the College of Education.

In this course the prospective teacher is introduced in a variety of ways to problems and processes of education around which much of the work in later professional courses will be centered. Guidance is stressed. Open to sophomores only.

Ed. 4. Reading Clinic (2)—First and second semesters.

This course is designed for anyone wishing to improve reading skill. Reading difficulties are diagnosed through telebinocular eye examinations, photographs of eye movements, and standardized tests. Remedial treatment is given to improve speed, comprehension, and organization of ideas. Attention is given to the improvement of study habits. Fee, $1.00.

For Advanced Undergraduates and Graduates

Ed. 100. History of Education I (2)—First semester.

A study of educational institutions and thought through the ancient, mediaeval, and early modern periods.

Ed. 101 History of Education II (2)—Second semester.

Emphasis is placed on the post-Renaissance periods.

Ed. 102. History of Education in the United States (2)—Summer Session, 1947.

A study of the origins and development of the chief features of the present system of education in the United States.

Ed. 105. Comparative Education (2)—Second semester.

A study of national systems of education with the primary purpose of discovering their characteristic differences and formulating criteria for judging their worth.

Ed. 106. Comparative Education (2)—First semester.

This course is a continuation of Ed. 107, with emphasis upon the national educational systems of the Western Hemisphere.

Ed. 107. Philosophy of Education I (2)—Not offered in 1946-47.

A study of the great educational philosophers and their contributions to modern education. Earlier periods.

Ed. 108. Philosophy of Education II (2)—Not offered in 1946-47.

Systems of thought affecting the development of education with emphasis on recent periods and the United States.

Ed. 110. The Teacher and School Administration (2)—Summer Session, 1947.

This course is designed to acquaint the classroom teacher with the general field of school administration. It considers the relationships of the teacher to the several administrative and supervisory officials and services in the system, with emphasis on the teacher's role in the organization.

Ed. S121. The Language Arts in the Elementary School (2)—Summer Session, 1947.

This course is concerned with present trends in the teaching of reading, spelling, handwriting, written and oral language, and creative expression. Special emphasis is given to the use of the skills in meaningful situations having real significance to the pupils.

Ed. S122. The Social Studies in the Elementary School (2)—Summer Session, 1947.

The emphasis in this course is on pupil growth through social experiences. Consideration is given to the utilization of environmental resources, curriculum, organization and methods of teaching, and evaluation of newer methods and materials in the field.

Ed. 126. The Elementary School Curriculum (2)—Not offered in 1946-47.

A study of important developments in elementary education with particular attention to methods and materials which may be used to improve the development of pupils in elementary schools. Problems which are encountered in day-to-day teaching situations receive much attention.

Ed. 130. Theory of the Junior High School (2)—Second semester.

This course gives a general overview of the junior high school. It includes consideration of the purposes, functions, and characteristics of this school unit; a study of its population, organization, program of studies, methods, and staff; and other similar topics, together with their implication for prospective teachers.

Ed. 131. Theory of the Senior High School (2)—Second semester.

The secondary school population; the school as an instrument of society; relation of the secondary school to other schools; aims of secondary education; curriculum and methods; extra-curricular activities; guidance and placement; teacher certification and employment in Maryland and the District of Columbia. This course is somewhat more general than Ed. 130.

Ed. 140. Curriculum, Instruction, and Observation (3)—Second semester.

This course is offered in separate sections for the various subject matter areas, namely, English, social studies, foreign language, science, mathematics, art education, business education, industrial education, and physical education. Registration cards must include the subject-matter area as well as the name and number of the course. Graduate credit is allowed only by special arrangement.

In each section the objectives, selection and organization of subject matter, appropriate methods, lesson plans, textbooks, and other instructional materials, measurement, and other topics pertinent to the particular subject matter area are treated.

Twenty periods of observation.

Ed. 141. High School Course of Study-English (2)—First semester.

This course is concerned with the selection and organization of content for English classes in secondary schools. Subject matter is analyzed to clarify controversial elements of form, style, and usage.

Ed. 142. High School Course of Study-Literature (2)—Second semester.

Literature adapted to the various grade levels of junior and senior high schools is studied.

Ed. 143. Methods and Practice of Teaching (5)—First and second semesters. Prerequisite, Ed. 140, grade point average of 2.275, and approval of faculty. Undergraduate credit only.

This course is identical with Ed. 149 except that the time spent in the high school consists of three half days per week throughout the semester. It is open only to physical education majors.

Ed. S144. Materials and Procedure for the Junior High School Core Curriculum (2)—Summer Session, 1947.

This course is designed to bring practical suggestions to teachers who are in charge of core classes in junior high schools. Materials and teaching procedures for specific units of work are stressed.

Ed. 146. Techniques of Teaching Office Skills (2)—Second semester.

An examination and evaluation of the aims, methods, and course contents of each of the office skill subjects offered in the high school curriculum.

Ed. 147. Audio-Visual Education (2)—First semester.

Sensory impressions in their relation to learning; projection apparatus, its cost and operation; slides, film-strips, and films; physical principles underlying projection; auditory aids to instruction; field trips; pictures, models, and graphic materials; integration of sensory aids with organized instruction. Fee, $1.00.

Ed. 148. Methods and Practice of Teaching (4)—First and second semesters. Prerequisite, Ed. 140, grade-point average of 2.275, and approval of faculty. Undergraduate credit only.

Forty-five periods of observation, participation, and teaching in a high school class under the direction of the regular teacher and the university adviser. Two hours of class sessions weekly are included in which study is made of principles and methods of teaching.

Students should arrange their university schedules so as to allow ample time for the student teaching assignment. Application forms for this course, properly filled in, must be submitted to the Director of Student Teaching not later than the time of registration, preferably earlier. In registering, add to the course number the subject matter field in which the teaching is to be done, English, foreign language, mathematics, science, social studies, business, physical education, or industrial education.

Ed. 149. **Methods and Practice of Teaching** (9)—First and second semesters. Prerequisite, Ed. 140, grade-point average of 2.275, and approval of faculty. Undergraduate credit only.

Students who register in this course serve as apprentice teachers in the schools to which they are assigned. One-half of each school day for not less than 15 weeks is devoted to this work, which is carried on under the direction of one or two teachers in the school and of the university adviser. Opportunity is afforded for experience in connection with school activities, guidance, reports, records, and other phases of school life as well as classroom teaching. Two hours weekly of class sessions are included in which study is made of the principles and methods of teaching.

Application forms for this course, properly filled in, must be submitted to the Director of Student Teaching not less than thirty days before registration. In registering, add to the course number the subject matter field or fields in which the teaching is done; English, foreign language, mathematics, science, social studies, business, physical education, or industrial education.

Ed. 150. **Educational Measurement** (2)—First semester.

A study of tests and examinations with emphasis upon their construction and use. Types of tests; purposes of testing; elementary statistical concepts, and processes used in summarizing and analyzing test results; school marks.

Ed. 151. Remedial Reading Instruction (2)—First semester.

Causes for reading disabilities; diagnostic techniques; and corrective methods are studied. Instructional materials are evaluated. The course is designed for both elementary and secondary school teachers.

Ed. 152. The Adolescent: Characteristics and Problems (3)—Second semester.

This course deals with the intellectual, emotional, social, and vocational problems which arise in the transitional period between childhood and adulthood, the secondary school period.

Ed. S153. The Improvement of Reading (2)—Summer, 1947.

This course is intended for teachers working at the intermediate and secondary school levels. Attention is given to the teaching of reading in different school subjects, the selection of reading materials, the study of individuals with reference to causes of reading deficiencies, types of reading lessons, and certain elements of psychology essential to intelligent consideration of problems in this field.

Ed. 155. Child Development and Guidance in the Elementary School (2)—First semester and Summer Session, 1947.

This course is concerned with (1) the characteristics of elementary school children and (2) their implications for teachers. It includes the following areas: significant characteristics of physical growth; factors which influence social, emotional, and intellectual development; how to gain a more adequate understanding of individuals; utilizing and modifying home influences; basic personality needs of children; how to work with children, including desirable pupil-teacher relationships.

Ed. 160. Educational Sociology—Introductory (2)—First semester.

This course deals with data of the social sciences which are germane to the work of teachers. Consideration is given to implications of democratic ideology for educational endeavor, educational tasks imposed by changes in population and technological trends, the welfare status of pupils, the socio-economic attitudes of individuals who control the schools, and other elements of community background which have significance in relation to schools.

Ed. 161. Guidance in Secondary Schools (2)—First semester.

This course is primarily designed for the classroom teacher in terms of the day-by-day demands made upon him *as a teacher* in the guidance of the youth in his classes and in the extra-class activities which he sponsors. The stress is upon usable materials and upon practical common-sense guidance procedures of demonstrated workability.

Ed. 170. Introduction to Special Education (2)—Not offered in 1946-47.

This course is designed to give teachers, principals, attendance workers, and supervisors an understanding of the needs of all types of exceptional children. Preventive and remedial measures are stressed.

Ed. 171. Education of Retarded and Slow-Learning Children (2)—Not offered in 1946-47.

A study of retarded and slow-learning children, including discovery, analysis of causes, testing techniques, case studies, and remedial educational measures.

Ed. S183. Recent Trends in Curriculum and Methods in the Elementary School (2)—Summer Session, 1947.

Emphasis in this course will be placed on recent trends in elementary education, newer instructional practices and classroom procedures, organization of learning experiences, and modern techniques of evaluation. New methods and materials will be critically evaluated. Opportunity for the study and discussion of individual problems will be given.

Ed. 190. Principles of Education (2)—Second semester.

This course is concerned with the purposes of education, processes whereby specific educational objectives are attained, the direction of learning activities, and the reactions of people to forces about them. Attention is given factors which influence the development and adjustment of individuals. The course is primarily for students enrolled in Arts and Sciences and Home Economics Colleges.

Ed. 191. Conservation of Natural Resources (3)—First and second semesters.

This course, which is given in collaboration with the State Department of Research and Education, is designed to acquaint students with the necessity, means, and methods of protecting the soil, animals, plants, and mineral resources of the State and Nation. Credit for it is accepted as part of the science requirement of students in the College of Education.

For Graduates

Ed. 205. Seminar in Comparative Education (2)—Not offered in 1946-47.

Ed. 207. Seminar in Philosophy of Education (2)—Not offered in 1946-47.

Ed. 209. Seminar in History of Education (2)—Second semester.

Ed. 210. The Organization and Administration of Public Education (2)—First semester.

This course deals with so-called "external" phases of school administration. It includes study of the present status of public school administration; organization of local, state, and federal educational authorities; and the administrative relationships involved therein.

Ed. 211. The Organization, Administration, and Supervision of Secondary Schools (2)—Second semester.

This course is designed as a continuation of Ed. 210, but may be taken independently. It includes what is called "internal" administration; the organization of units within a school system; the personnel problems involved; and such topics as schedule making, teacher selection, public relations, and school supervision.

Ed. 212. School Finance and Business Administration (2)—Summer Session, 1947.

This course deals principally with school revenue and taxation; federal and state aid and equalization; purchase of supplies and equipment; internal school accounting; and other selected problems of local school finance.

Ed. S213. Administration and Teaching in Junior High School (2)—Summer Session, 1947.

This course is concerned with persistent problems and related administrative organization and policy. It is designed for teachers and administrators. Emphasis is placed on ways and means whereby junior high schools may realize their functions fully.

Ed. S214. School Buildings and Equipment (2)—Summer Session, 1947.

This course emphasizes the planning and construction of school buildings, the development of building programs, and the selection of equipment. The care and upkeep of school buildings also receive attention.

Ed. 215. Public Education in Maryland (2)—Not offered in 1946-47.

A study of Maryland Public School system with special reference to school law.

Ed. 216. High School Supervision (2)—Not offered in 1946-47.

This course deals with the nature and function of supervision; recent trends in supervisory theory and practice; teacher participation in the determination of policies; planning of supervisory programs; appraisal of teaching methods; curriculum reorganization, and other means for the improvement of instruction.

Ed. 217. Administration and Supervision in Elementary Schools (2)—Summer Session, 1947.

A study of the problems connected with organizing and operating elementary schools and directing instruction.

Ed. 219. Seminar in School Administration (2)—First semester and Summer Session, 1947.

Ed. 229. Seminar in Elementary Education (2)—Summer Session, 1947.

Ed. S232. Student Activities in the High School (2)—Summer Session, 1947.

This course offers a consideration of the problems connected with the so-called "extra-curricular" activities of the present-day high school. Special consideration will be given to (1) philosophical bases, (2) aims, (3) organization, and (4) supervision of student activities such as student council, school publications, musical organizations, dramatics, assemblies, and clubs. Present practices and current trends will be evaluated.

Ed. 236. Curriculum Development in the Secondary School (2)—Summer Session, 1947.

Ed. 239. Seminar in Secondary Education (2)—First semester.

Ed. 247. Seminar in Science Education (2)—Not offered in 1946-47.

Ed. 248. Seminar in Vocational Education (2)—First semester.

Ed. S250. Anaylsis of the Individual (2)—Summer Session, 1947.

This course is concerned with the selection and administration of tests and inventories. Interpretation and use of data are stressed.

Ed. S255. Principles and Problems of Business Education (2)—Summer Session, 1947.

Principles and practices in business education; growth and present status; vocational business education; general business education; relation to consumer education and to education in general.

Ed. S261. Counseling Techniques (2)—Summer Session, 1947.

This course deals with the various specialized techniques, procedures, and materials utilized by guidance specialists in the schools. To be required for the proposed Maryland counseling certificate.

Ed. S262. Occupational Information (2)—Summer Session, 1947.

This course is designed to give counsellors, teachers of social studies, school librarians, and other workers in the field of guidance and education a background of educational and occupational information which is basic for counseling and teaching.

Ed. 268. Seminar in Educational Sociology (2)—Second semester.

Ed. 269. Seminar in Guidance (2)—First semester and Summer Session, 1947.

Ed. 278. Seminar in Special Education (2)—Not offered in 1946-47.

Ed. 279. Seminar in Adult Education (2)—Not offered in 1946-47.

Ed. 280. Research Methods and Materials in Education (2)—Summer Session, 1947.

A study of research in education, the sources of information and techniques available, and approved form and style in the preparation of research reports and theses.

Ed. 281. Source Materials in Education (2)—Not offered in 1946-47.

A course based on the text and work-book by Carter Alexander, "How to Locate Educational Information and Data." The work involves attendance at class for one hour with two additional hours of work in the library. Especially valuable for students interested in research.

Ed. 289. Research (1-6).

Home Economics Education

For Advanced Undergraduates and Graduates

H. E. Ed. 101. Curriculum, Instruction, and Observation (3)—Second semester. Required of juniors in Home Economics Education. Prerequisite, Psych. 80.

Philosophy of education for family living; analysis of needs of high school girls; study of community resources; directed observations; curriculum and unit construction.

H. E. Ed. 102. Problems in Teaching Home Economics (3)—First semester. Required of seniors in Home Economics Education. Prerequisite, H. E. Ed. 101.

Study of various techniques; analysis of textbooks; evaluation of illustrative material; the home project.

H. E. Ed. 103. Teaching Secondary Vocational Home Economics (4-8)—Second semester. Prerequisite, H. E. Ed. 101 and 102.

Observation and supervised teaching in an approved secondary vocational home economics department in Maryland or the District of Columbia. Students are encouraged to elect the longer teaching period.

H. E. Ed. 110. Child Development (3)—First and second semester.

The study of the child in relation to the physical, motor, emotional and social aspects of development; adaptation to the teaching of child care in high school; field trips to well-baby clinic; observation in nursery schools; reviews of current books.

H. E. Ed. 111. Curriculum, Instruction, Observation-Nursery School (3) —First semester. Prerequisite, H. E. Ed. 110.

Guidance of children in relation to developmental needs; observation of children, teachers, and parents; participation in a nursery school.

H. E. Ed. 112. Play and Play Materials (2)—Second semester. Prerequisite, H. E. Ed. 110.

Study of play materials and play equipment in relation to use by different age levels; observation in nursery school; participation with a play group in a home.

H. E. Ed. 116, 117. Creative Expression; Art, Music, Dance (3, 3)—First and second semester. Prerequisite, P. E. 56, 58.

Correlation of arts as related to the abilities of the child in terms of his development.

H. E. Ed. 118. Teaching Nursery School (4-8)—Second semester. Prerequisite, H. E. Ed. 111.

Teaching in an approved nursery school; participation in teachers' workshop; attendance at parents' meetings; observation in other nursery schools after teaching is completed.

Industrial Education

For each semester hour of credit for shop and drawing courses two or three periods of lecture and practice are scheduled depending upon the specific needs of the course.

Ind. Ed. 1. Mechanical Drawing (2)—First semester. Two laboratory periods a week.

This course constitutes an introduction to orthographic multi-view and isometric projection. Emphasis is placed upon the visualization of an object when it is represented by a multi-view drawing and upon the making of multi-view drawings.

This course carries through auxiliary views, sectional views, dimensioning, conventional representation and single stroke letters. Laboratory fee, $3.00.

Ind. Ed. 21. Mechanical Drawing (2)—Second semester. Two laboratory periods a week. Prerequisite, Ind. Ed. 1.

A course dealing with working drawings, machine design, pattern layouts, tracing and reproduction. Detail drawings followed by assemblies are presented. Laboratory fee, $3.00.

Ind. Ed. 31. Mechanical Drawing (2)—First semester. Two laboratory periods a week. Prerequisites, Ind. Ed. 1 and 21.

A course dealing with the topics enumerated in Ind. Ed. 21 but on a more advanced basis. The reading of prints representative of a variety of industries is a part of this course. Laboratory fee, $3.00.

Ind. Ed. 41. Architectural Drawing (2)—Second semester. Two laboratory periods a week. Prerequisite, Ind. Ed. 1, or equivalent.

Practical experience is given in the design and planning of homes and other buildings. Working drawings, specifications and blue-prints are featured. Laboratory fee, $3.00.

Ind. Ed. 101S. Operational Drawing (2)—Summer. Two laboratory periods a day. Prerequisite, Ind. Ed. 1, or equivalent.

A comprehensive course designed to give students practice in the modern drafting methods of industry. Laboratory fee, $3.00.

Ind. Ed. 160. Essentials of Design (2)—First semester. Two laboratory periods a week. Prerequisites, Ind. Ed. 1 and basic shop work.

A study of the basic principles of design and practice in their application to the construction of shop projects. It treats the art elements of line, mass, color, and design. Laboratory fee, $3.00.

Ind. Ed. 2. Elementary Woodworking (2)—First semester. Two laboratory periods a week.

This is a woodworking course which involves the use of hand tools almost exclusively. The course is developed so that the student uses practically every common woodworking hand tool in one or more situations. There is also included elementary wood finishing, the specifying and storing of lumber, and the care and conditioning of tools used. Laboratory fee, $3.00.

Ind. Ed. 22. Machine Woodworking I (2)—Second semester. Two laboratory periods a week. Prerequisite, Ind. Ed. 2.

Machine Woodworking I offers initial instruction in the proper operation of the jointer, band saw, variety saw, jig saw, mortiser, shaper, and lathe. The types of jobs which may be performed on each machine and their safe operation are of primary concern. The medium of instruction is school-shop equipment, hobby items, and useful home projects. Laboratory fee, $3.00.

Ind. Ed. 42. Machine Woodworking II (2)—First semester. Two laboratory periods a week. Prerequisite, Ind. Ed. 22, or equivalent.

Advanced production methods with emphasis on cabinetmaking and design. Laboratory fee, $3.00.

Ind. Ed. 102S. Advanced Woodfinishing and Design (2)—Summer. Two laboratory periods a day. Prerequisite, Ind. Ed. 22, or equivalent.

Advanced finishing room methods applied. The application of color and its use in the improvement of design. Laboratory fee, $3.00.

*Ind. Ed. 23. Forge Practice (1)—Second semester. One laboratory period a week.

Laboratory practice in forging and the heat treatment of metals. Theory and principles of handling tools and materials. Laboratory fee, $3.00.

Ind. Ed. 24. Sheet Metal Work (2)—First semester. Two laboratory periods a week.

Articles are made from metal in its sheet form and involve the operations of cutting, shaping, soldering, riveting, wiring, folding, seaming, beading, burring, etc. The student is required to develop his own patterns inclusive of parallel line development, radial line development, and triangulation. Common sheet metal tools and machines are used in this course. Laboratory fee, $3.00.

Ind. Ed. 104S. Advanced Practices in Sheet Metal Work (2)—Summer. Two laboratory periods a day. Prerequisite, Ind. Ed. 24, or equivalent.

Study of the more complicated processes involved in commercial items. Calculations and pattern making are emphasized. Laboratory fee, $3.00.

Ind. Ed. 85, 105. General Shop (1-1)—First and second semesters. One laboratory period a week.

Designed to meet needs in organizing and administering a secondary school General Shop. Students are rotated through skill and knowledge developing activities in mechanical drawing, electricity, woodworking, and general metal working. Laboratory fee, $3.00.

Ind. Ed. 26. Art Metal Work I (2)—Second semester. Two laboratory periods a week.

An introductory course in designing and constructing art products in aluminum, copper and brass. The processes covered include surface decoration by hammering, piercing, etching, enameling, heat treatment and finishing. Laboratory fee, $3.00.

Ind. Ed. 66S. Art Metal Work (2)—Summer. Two laboratory periods a day. Prerequisite, Ind. Ed. 26, or equivalent.

Advanced practicum. It includes methods of bowl raising and bowl ornamenting. Laboratory fee, $3.00.

Ind. Ed. 106S. Art Metal Work (2)—Summer. Two laboratory periods a day.

Simple operations in the art of making jewelry including ring making, stone setting, etc. Laboratory fee, $3.00.

Ind. Ed. 67. Cold Metal Work (2)—Second semester. Two laboratory periods a week.

Metal in the form of bars, rods and tubes are shaped cold to produce "ornamental iron" and bench metal products. The use of the hacksaw, file,

---

* Alternate course offered by the College of Engineering.

drill press, taps and dies, the designing and forming of scrolls and the finishes appropriate for cold metal work are representative of the course content. Laboratory fee, $3.00.

Ind. Ed. 28. Electricity I (2)—First semester. Two laboratory periods a week.

An introductory course to electricity in general. It deals with the electrical circuit, elementary wiring problems, the measurement of electrical energy, and a brief treatment of radio such as may be offered at the junior high school level. Laboratory fee, $3.00.

Ind. Ed. 48. Electricity II (2)—Second semester. Two laboratory periods a week.

Principles involved in A-C and D-C electrical equipment, including heating, measurements, motors and control, electro-chemistry, the electric arc, inductance and reactance, condensers, radio, and electronics. Laboratory fee, $3.00.

Ind. Ed. 108S. Electricity III (2)—Summer. Two laboratory periods a day. Prerequisite, Ind. Ed. 28, or equivalent.

Experimental development of apparatus and equipment for teaching the principles of electricity. Laboratory fee, $3.00.

Ind. Ed. 69. Machine Shop Practice I (2)—Second semester. Two laboratory periods a week. Prerequisite, Ind. Ed. 1, or equivalent.

Bench work, turning, planing, milling, and drilling. Related technical information. Laboratory fee, $3.00.

Ind. Ed. 89. Machine Shop Practice II (2)—First semester. Two laboratory periods a week. Prerequisite, Ind. Ed. 69, or equivalent.

Advanced shop practicum in thread cutting, grinding, boring, reaming, and gear cutting. Work-production methods employed. Related technical information. Laboratory fee, $3.00.

***Ind. Ed. 110. Foundry (1)**—First semester. One laboratory period a week.

Bench and floor molding and elementary core making. Theory and principles covering foundry materials, tools and appliances. Laboratory fee, $3.00.

Ind. Ed. 94S. Shop Maintenance (2)—Summer. Prerequisite, 8 semester hours of shop credit, or equivalent.

Skill developing practice in the up-keep and care of school shop tools and equipment.

Ind. Ed. 140 (Ed. 140). Curriculum, Instruction, and Observation (3)—Second semester. Prerequisite, Educational Psychology.

Major functions and specific aims of Industrial Education; their relation to the general objectives of the junior and senior high schools; selection and organization of subject matter in terms of modern practices and needs; methods of instructions; expected outcomes; measuring results; professional standards. Twenty periods of observation.

---

* Alternate course offered by the College of Engineering.

Ind. Ed. 164. Shop Organization and Management (2)—First semester.

This course covers the basic elements of organizing and managing an Industrial Arts program including the selection of equipment and the arrangement of the shop.

Ind. Ed. 165S. Modern Industry (2)—Summer Session, 1947.

This course provides an overview of factory organization and management. Representative basic industries are studied from the viewpoints of personnel and management organization, industrial relations, production procedures, distribution of products, and the like.

Ind. Ed. 166. Educational Foundations of Industrial Arts (2)—First semester.

A study of the factors which definitely place Industrial Arts education in any well-rounded program of general education. Lectures, class discussions, reading and reports.

Ind. Ed. 167. Problems in Occupational Education (2)—Summer.

The purpose of this course is to secure, assemble, organize, and interpret data relative to the scope, character and effectiveness of occupational education.

Ind. Ed. 168. Trade or Occupational Analysis (2)—Summer session, 1947.

Provides a working knowledge of occupational and job analysis which is basic in organizing Industrial Education courses of study. This course should precede Ind. Ed. 169.

Ind. Ed. 169. Construction of Vocational and Occupational Courses of Study (2)—Summer session, 1947.

Surveys and applies techniques of building and reorganizing courses of study for effective use in vocational and occupational schools.

Ind. Ed. 170. Principles and Practices of Vocational Education (2)—Summer session, 1947.

The course develops the Vocational Education movement as an integral phase of the American program of public education.

Ind. Ed. 171. History of Vocational Education (2)—First semester.

An overview of the development of Vocational Education from primitive times to the present. The evolution of Industrial Arts is also considered.

Ind. Ed. 207. Philosophy of Industrial Arts Education (2)—First semester.

This course is intended to assist the student in his development of a point of view as regards Industrial Arts and its relationship with the total educational program. He should, thereby, have a "yardstick" for appraising current procedures and proposals and an articulateness for his own professional area.

Ind. Ed. 220. Organization, Administration and Supervision of Vocational Education (2)—Summer.

This course surveys objectively the organization, administration, supervision, curricular spread and viewpoint, and the present status of vocational Education. Alternate, Ed. 200 or Ed. 202.

Ind. Ed. 240. Research in Industrial Arts and Vocational Education (2)—Arranged.

This is a course offered by arrangement for persons who are conducting research in the areas of Industrial Arts and Vocational Education.

Ind. Ed. 241. Content and Method of Industrial Arts (2)—Second semester.

Various methods and procedures used in developing courses of study are examined and those suited to the field of Industrial Arts education are applied. Methods of and devices for Industrial Arts instruction are studied and practiced.

Ind. Ed. 248. Seminar in Industrial Arts and Vocational Education (2)—Summer session.

This seminar deals with the issues and functions of Industrial Arts and Vocational Education, particularly in respect to the emerging changes in educational planning on the secondary school level. Opportunity is given to students majority in Industrial Education to write one of the seminar reports required for the degree of Master of Education.

ARTS CRAFTS SEQUENCE

Industrial Education 9, 10, and 11 constitute an art crafts sequence (Art Crafts I, II, and III). The courses are intended to assist persons who are preparing to teach art crafts in grade 7 of the public schools of Maryland or for teachers who have already undertaken this type of work in the schools. The work is appropriate also for persons who teach art crafts at any grade level and for those who teach art crafts in camps, clubs, adult evening classes, and the like.

Ind. Ed. 9. Art Crafts I (2)—Summer session. Two laboratory periods a day.

The materials used in Art Crafts I are woods, metals, leathers and plastics. Each student is provided the opportunity of doing a variety of types of work in the four media. Laboratory fee $3.00.

Ind. Ed. 10. Art Crafts II (2)—Summer session. Two laboratory periods a day.

Art Crafts II offers work experiences in model building, ceramics, graphic arts, and paper construction. Laboratory fee, $3.00.

Ind. Ed. 11. Art Crafts III (2)—Summer session. Two laboratory periods a day.

Art Crafts III provides instruction in the principles of design which are pertinent to craft work and takes up reed and raffia, threads (weaving, hooking, knitting), and seasonal activities. Laboratory fee, $3.00.

Physical Educational Courses Open to Both Men and Women

P. E. 30. History and Principles of Physical Education (3)—First semester.

Designed to give an overview of physical education from primitive to modern times.

P. E. 40. Hygiene (3)—First semester. Prerequisites, Zool. 1, Bact. 1.

A study of personal and community hygiene for major students. Emphasis on causitive factors of various diseases, means of transmission, and prevention.

P. E. 50. Safety Education (2)—Second semeseter.

A study of safety in the home, school, and on the highways and streets. Planning school safety courses. Emphasis on prevention of athletic injuries.

P. E. 60. Gymnastics (3)—First semester. Lecture and laboratory. Five hours weekly.

Theory and practice of activities designed for instructing large groups in small areas. Covers calisthenics, elementary tumbling and gymnastics, and mass games and relays.

P. E. 70. First Aid (2)—First semester.

Standard and Advanced Red Cross course in First Aid.

P. E. 100, 110. Kinesiology (2, 2)—First and second semesters. Prerequisites, Zool. 14, 15.

The study and analysis of human motion conforming to the laws of mechanics and principles of physiology and anatomy.

P. E. 140. Therapeutics (3)—Second semester. Prerequisites, P. E. 100, 110.

A study of common structural abnormalities, corrective exercises, and massage. Causes, prevention and correction of postural defects. Testing methods. Theory and practice.

P. E. 150, 170. Recreational Dance (2, 2)—First and second semesters Two laboratory and one lecture a week.

This course includes American square and country dances, folk and social dancing. It is planned to be of value to men and women interested in the social life of the school and community. Research in pertinent books and methods of teaching.

P. E. 160. Introduction to Recreation (3)—First semester.

A survey of the entire field of recreation. Emphasis is placed on history, aims, objectives, organization, leadership, areas, facilities, and programs for youth and adults.

P. E. 180. Tests and Measurements in Physical Education (3)—Second semester.

A study of the theory and use of achievement standards and tests of physical fitness, motor ability, sport skills, etc., with emphasis on the analysis and interpretation of results and their application to school programs of physical education.

Rec. 100. The Co-recreational Program (3)—Second semester.

Activities for social recreation.

Rec. 110. Nature Lore (3)—Second semester.

The conduct of nature trips for study and appreciation of plant, insect, and animal life, and astronomy.

Rec. 120. Camp Administration and Leadership (3)—Second semester.

The observation and practice in the conduct of summer camps for children and adults. A study of woodcraft, boating, and overnight trips, including outdoor cookery.

Rec. 130. Observation and Service in Recreation (5)—First and second semesters.

Observation of recreation centers, city playgrounds, community and night centers. Leadership practice in these areas.

Rec. 140. Organization and Administration of Recreation (2)—Second semester.

A consideration of the management and the personnel required to conduct recreation activity programs by municipal, industrial, school, club, and social agencies.

Hea. 110. Health Service and Health Supervision (3)—First semester.

The supervision of health inspection and physical examinations of students by school nurses and physicians, including the sanitary inspection of the school plant.

Hea. 120. Teaching Health (2)—Second semester. Prerequisite, P. E. 40, or equivalent.

A study of materials and methods in health education. Planning the health education curriculum.

Hea. 130. Organization and Administration of Health Education (3)—Second semester.

The planning of a graded school curriculum and the presentation of courses of study in hygiene to the classroom teachers.

Physical Education for Men

P. E. 41, 43, 45, 47. Varsity Sports (2 hours credit for each sport).

A study and practice of the fundamental skills; organization and the theory and strategy of team play. P. E. 41 Football (2)—Fall; P. E. 43 Basketball (2)—Fall; P. E. 45 Track (2)—Spring; P. E. 47 Baseball (2)—Spring.

P. E. 51. Minor Sports Skills (1)—First semester. Three hours weekly.

A block of courses which cover the fundamental skills, rules, and strategies of touch football, volley ball, soccer, and softball, and other recreational sports.

P. E. 53. Intramurals (1) or (2)—First and second semesters.

Organization, administration, and promotion of intramurals at various school levels. Types of tournaments, units of competition, handling of student leader personnel, etc. An extra hour of credit may be earned by assisting in the university sports program by arrangement.

P. E. 57—Combative Sports Skills (1)—Second semester. Two hours weekly.

A block of courses which cover the fundamental skills, rules, and strategies of boxing, wrestling, and judo.

P. E. 61. Advanced Gymnastics (1)—First and second semesters. Three hours weekly.

Instruction for those students who wish to practice advanced techniques of apparatus and tumbling activities.

P. E. 63. Officiating (2)—Second semester.

A thorough study of the rules and techniques of officiating. Students will officiate in university Intramural program.

P. E. 171. Organization and Administration of Physical Education (3)—Second semester.

A study of the problems of coordinating health, physical education, and athletics in a school program. Professional responsibilities of the instructor and coach will be emphasized. Scheduling, public relations, care and purchase of equipment, etc., are discussed.

P. E. 181. Training and Conditioning (1)—First semester.

The training and physical conditioning of athletics. Treatment of athletic injuries by taping, massage, hydrotherapy, and electro-therapy.

Physical Education for Women

Physical Activities (1, 1)—First and second semesters. Two periods a week. Required of all freshman and sophomore women.

All freshmen must enroll for Freshman Orientation; this course provides instruction and practice in the fundamentals of sports and rhythms, and training in the basic skills of body movement.

Sophomores may elect from the following: soccer, speedball, hockey, volley ball, softball, basketball, tennis, archery, fencing, badminton, dance, body mechanics, and physical fitness. Classes in restricted and adaptive activities are provided for the students for whom the University physician recommends limited exercise. Special classes are offered for those who need correction in posture and body mechanics.

P. E. 42. Hygiene I (2)—First semester. Required of all freshman women.

A course designed to acquaint the women with individual behavior in relation to health.

P. E. 44. Hygiene II (2)—Second semester. Required of all freshman women.

A course concerned with the health of people as a group, and with the community, governmental and social organizations and activities which attempt to better the environmental factors of the community.

P. E. 52, 54. Dance Techniques (2, 2)—First and second semesters. Two laboratory and one lecture period a week.

A basic course which includes movement techniques of modern dance and analysis of form and composition.

P. E. 56, 58. Dance Techniques (2, 2)—First and second semesters. Two laboratory and one lecture period a week.

A continuation of P. E. 52, 54. More advanced movements of the modern dance techniques are studied. Students are given the opportunity to create and participate in simple group dances. Theory in teaching methods.

P. E. 62, 64. Techniques of Sport Skills (2, 2)—First and second semesters. Two laboratory and one lecture period a week.

Theory and practice in the techniques and teaching of sports. Hockey, basketball, softball.

P. E. 66, 68. Techniques of Sport Skills (2, 2)—First and second semesters. Two laboratory and one lecture period a week.

A continuation of P. E. 62, 64. Soccer, speedball, volley ball, fencing, and archery.

P. E. 102, 104. Techniques of Sport Skills (2, 2)—First and second semesters. Two laboratory and one lecture period a week.

A continuation of P. E. 66, 68. Tennis, stunts, tumbling, apparatus, marching, recreational games.

P. E. 106, 108. Techniques of Sport Skills (2, 2)—First and second semesters. Two laboratory and one lecture period a week.

A continuation of P. E. 102, 104. Track, badminton, swimming. For recreation majors golf is substituted for track.

P. E. 112. History of Dance (3)—First semester. Prerequisites, P. E. 52, 54, 56, 58.

Designed to give an overview of the development of dance from primitive to modern times. Students have experience in planning dances for specific historic periods.

P. E. 116. Organization and Administration of Physical Education (3)—Second semester. Prerequisite, P. E. 30.

A study of current practice in program planning, organization of personnel, intramurals, and sports days. Administration of activities, equipment, and facilities.

P. E. 122. Individual Sports (2).

Theory and practice in the techniques and teaching of badminton, golf, and tennis.

P. E. 124, 126. Coaching and Officiating (2, 2)—First and second semesers. Two laboratory and one lecture period a week. Prerequisites, P. E. 62, 64, 66, 68.

Theory in coaching and officiating sports for women. Practice in intramural programs of the University and in schools in Washington, D. C. Opportunity for National Officials Rating.

P. E. 138. Advanced Modern Dance (2)—Second semester. Two laboratory and one lecture a week. Prerequisites, P. E. 52, 54, 56, 58.

Advanced techniques and practice in teaching dance.

Hea. 112. Home Nursing (2)—First semester.

A study of the use of household remedies and the care of house patients, bed making, preparation of invalid's food, use of thermometer, and care before the physician arrives.

Hea. 114. Health Education for Elementary Schools (2).

Materials and methods in health education for the classroom teacher.

Rec. 102. Recreational Games for the Elementary School (2).

Materials and methods. Theory and practice in teaching games.

ELECTRICAL ENGINEERING

E. E. 1. Electrical Engineering Fundamentals I (4)—Second semester. Three lectures and one laboratory period a week. Prerequisites, concurrent registration in Math. 21 and Phys. 21. Required of sophomores in electrical engineering.

Current, voltage, power, and energy relationships in D-C networks. Working concepts of electric and magnetic potential difference, electric and magnetic field intensity, and electric and magnetic flux density. Electric and magnetic circuit experiments.

For Advanced Undergraduates

E. E. 50. Principles of Electrical Engineering (3)—Second semester. Two lectures and one laboratory period a week. Prerequisites, Phys. 20, 21; Math. 20, 21. Required of juniors in civil engineering.

Fundamentals of direct-current and alternating-current machinery; application of machines for specific duties; operating characteristics of generators, motors, and transformers.

E. E. 51, 52. Principles of Electrical Engineering (4, 4)—First and second semesters. Three lectures and one laboratory period a week. Prerequisites, Phys. 20, 21; Math. 20, 21. Required of juniors in aeronautical, chemical and mechanical engineering.

Study of elementary direct-current and alternating-current circuit characteristics. Principles of construction and operation of direct- and alternating-current machinery. Experiments on the operation and characteristics of generators, motors, transformers, and control equipment.

E. E. 60. Electrical Engineering Fundamentals II (4)—First semester. Three lectures and one laboratory period a week. Prerequisite, E. E. 1. Required of juniors in electrical engineering.

This course is a continuation of E. E. 1.

E. E. 65. Direct Current Machinery (4)—Second semester. Three lectures and one laboratory period a week. Prerequisite, E. E. 2. Required of juniors in electrical engineering.

Construction, theory of operation, and performance characteristics of direct-current generators, motors, and control apparatus. Experiments on the operation and characteristics of direct-current generators and motors.

For Advanced Undergraduates and Graduates

E. E. 100. Alternating-Current Circuits (6)—First semester. Five lectures and one laboratory period a week. Prerequisite, Phys. 20, 21; Math. 20, 21. Required of juniors in electrical engineering.

Single- and polyphase-circuit analysis under sinusoidal and non-sinusoidal conditions of operation. Harmonic analysis by the Fourier series method. Theory and operation of mutually-coupled circuits. Elementary symmetrical components.

E. E. 101. Engineering Electronics (6)—Second semester. Five lectures and one laboratory period a week. Prerequisite, E. E. 100. Required of juniors in electrical engineering.

Theory and application of electronic tubes and associated control circuits. Emphasis on tube characteristics and electron-tube measuring devices, including the cathode-ray oscillograph as a measuring device. Applications of thyratrons and other rectifier tubes.

E. E. 102, 103. Alternating Current Machinery (4, 4)—First and second semesters. Three lectures and one laboratory period a week. Prerequisite, E. E. 54 and E. E. 100. Required of seniors in electrical engineering.

The operating principles of alternating-current machinery considered from theoretical, design, and laboratory points of view. Synchronous generators and motors; single and polyphase transformers; three-phase induction generators and motors; single phase induction motors; rotary converters and mercury-arc rectifiers.

E. E. 104. Communication Networks (3)—Second semester. Prerequisite, E. E. 100. Required of juniors in electrical engineering.

Calculation of transmission-line inductance and capacitance and high-frequency resistance of electrical conductors. Long-line theory applied to telephone circuits and to ultra-high-frequency systems. Elements of filter theory and wave guide theory.

E. E. 105, 106. Radio Engineering (4, 4)—First and second semesters. Three lectures and one laboratory period a week. Prerequisite, E. E. 101. Required of seniors in electrical engineering.

Principles of radio communication from both theoretical and laboratory points of view. Amplification, oscillation, modulation, and detection, with particular emphasis on audio amplication and broadcast-range reception. Elements of wave propagation and ultra-high frequency techniques.

E. E. 108. Electric Transients (3)—Second semester. Prerequisite, E. E. 101. Senior elective.

Current, voltage, and power transients in lumped-parameter networks. Transient phenomena in sweep circuits and inverters. Starting transients in transformers and short-circuit multi-vibrators transients in alternators with oscillographic demonstrations. Elements of square-wave testing.

E. E. 109. Uultra-High-Frequency Phenomena (3)—Second semester. Three lectures a week. Prerequisite, E. E. 105.

Elements of wave propagation, wave-guide transmission, u-h-f transmission lines, and high-frequency oscillators.

Mechanics of train motion. Application of electrical equipment to transportation. Construction and operation of control apparatus used in different fields of electrical transportation such as urban railways, trunk line railways, trolley busses and diesel-electrical equipment. Power requirements, distribution systems and signal systems.

E. E. 114. Applied Electronics (3)—First semester. Prerequisite, E. E. 101.

Analysis of controlled rectifiers, power switching, electronic inversion of electric power, and industrial control circuits. Some time is devoted to problems in design of electronic apparatus with pertinent laboratory demonstrations. Elements of high-frequency heating.

E. E. 116. Alternating-Current Machinery Design (3)—First semester. Two lectures and one calculation period a week. Prerequisite, E. E. 103.

Numerical design of transformers, synchronous machines, and induction machines.

E. E. 117. Transmission and Distribution (3)—Second semester. Prerequisite, E. E. 102.

Inductance and capacitance calculations of polyphase lines on a per-wire basis. Generalized parameters of four-terminal networks and long-line theory applied to power systems. Use of transmission line charts.

For Graduates

E. E. 200, 201. Symmetrical Components (3, 3)—First and second semesters. Prerequisite, E. E. 103.

Application of the method of symmetrical components to synchronous generators, transmission lines, transformers, static loads possessing mutual coupling, and induction motor loads. Methods of measuring positive, negative, and zero sequence reactance of synchronous generators and methods of calculating those component reactances of transmission lines. Complete network solution in terms of symmetrical components and comparison of those solutions with those obtained by classical methods.

E. E. 202, 203. Operational Circuit Analysis (3, 3)—First and second semesters. Prerequisite, undergraduate major in either electrical engineering or physics.

Transient analysis of electrical and mechanical systems by the Laplace transform method. The correlation of Laplace transforms and Heaviside operators is made in a sufficiently large number of cases to acquaint the student with the Heaviside method of analysis.

E. E. 204, 205. Industrial Electronics (3, 3)—First and second semesters. Two lectures and one laboratory period a week. Prerequisite, E. E. 101.

A more detailed study of electron tubes with particular emphasis on industrial types. The principles of operation of industrial electronic devices including ignition rectifiers, air cleaners, voltage, and speed regulators, photo relays, and high frequency heating equipment with laboratory exercises and performance tests. Some time is devoted to design problems.

E. E. 206, 207. Ultra-High-Frequency Techniques (3, 3)—First and second semesters. Two lectures and one laboratory period a week. Prerequisite, E. E. 106.

Theoretical and experimental studies of ultra-high-frequency oscillators, detectors, wave guides, transmission lines, and antenna arrays. Most of the experimental work is performed at 200 megacycles and at 3000 megacycles.

E. E. 210, 211. Advanced Radio Engineering (3, 3)—First and second semesters. Prerequisite, E. E. 106, or equivalent.

Stability criteria for amplifiers. Theory of radio-frequency oscillation, modulation, and detection, including both amplitude-modulation systems and frequency modulation systems. Broadcast antenna systems and theory of radio frequency measurements.

E. E. 215, 216—Radio Wave Propagation (3, 3)—Three lectures a week, first and second semesters. Prerequisites, undergraduate major in either physics or electrical engineering and an elementary knowledge of vector analysis.

Maxwell's equations, propagation over plane earth, underwater reception, propagation over spherical earth, ionospheric propagation, radar propagation and properties of radar targets, refraction and meteorological effects.

E. E. 217, 218. Theory of Servomechanisms (3, 3)—Three lectures a week first and second semesters. Prerequisite, E. E. 203 or the equivalent.

Analysis of electromechanical systems by reduction to equivalent electrical systems. Stability criteria. Automatic regulation and follow-up systems.

E. E. 220. Electrical Engineering Research. Prerequisite, a course of study leading to the degree of Master of Science in electrical engineering.

A thesis covering an approved research problem and written in conformity with the regulations of the Graduate School is a partial requirement for the degree of Master of Science in electrical engineering.

ENGINEERING—(General Engineering Subjects)

Aeronautical Engineering, see page 163.

Chemical Engineering, see pages 164, 257.

Civil Engineering, see page 165.

Electrical Engineering, see pages 166, 269.

Engineering Drawing, see page 247.

Mechanics, see page 313.

Mechanical Engineering, see pages 167, 314.

Shop, see page 161.

Surveying, see page 161.

Engr. 1. Introduction to Engineering (1)—First semester. Required of all freshmen in engineering.

A course of lectures by the faculty and by practicing engineers covering the engineering professional fields. The purpose of this course is to assist the freshman in selecting the particular field of engineering for which he is best adapted.

For Advanced Undergraduates and Graduates

Engr. 100. Engineering Contracts and Specifications (2)—Second semester. Prerequisite, senior standing in engineering.

The fundamental principles of law relating to business and engineering, including contracts, agency, negotiable instruments, corporations, and common carriers and their application to engineering contracts and specifications.

ENGLISH LANGUAGE AND LITERATURE

Eng. 1, 2. Composition and American Literature (3, 3)—First and second semesters. Required of freshmen. Both courses offered each semester. Prerequisite, three units of high school English.

Grammar, rhetoric, and the mechanics of writing; frequent themes. Readings will be in American Literature.

Eng. 3, 4. Composition and World Literature (3, 3)—First and second semesters. Prerequisite, Eng. 1, 2. Eng. 3, 4, or Eng. 5, 6, or some combination of the two required of sophomores beginning in 1946-47.

Practice in composition. An introduction to world literature, foreign classics being read in translation.

Eng. 5, 6. Composition and English Literature (3, 3)—First and second semesters. Prerequisite, Eng. 1, 2. Eng. 5, 6, or Eng. 3, 4, or some combination of the two required of sophomores beginning in 1946-47.

Practice in composition. An introduction to major English writers; several foreign classics to be read in translation.

Eng. 7. Technical Writing (2)—First and second semesters. Prerequisite, Eng. 1, 2.

For students desiring practice in writing reports, technical essays, or popular essays on technical subjects.

Eng. 8. College Grammar (3)—First semester. Prerequisite, Eng. 1, 2.

An analytical study of Modern English grammar, with lectures on the origin and history of inflectional and derivational forms.

Eng. 9. Introduction to Narrative Literature (3)—Second semester. Prerequisite, Eng. 1, 2.

An intensive study of representative stories, with lectures on the history and technique of the short story and other narrative forms.

Eng. 10. Advanced Composition (2)—Second semester. Prerequisite, Eng. 1, 2.

Practice in writing exposition, brief narration, feature articles, and news stories.

Eng. 52. Children's Literature (2)—Summer session. Prerequisite, Eng. 1, 2.

A study of literary values in prose and verse for children.

For Graduates and Advanced Undergraduates

Eng. 101. History of the English Language (3)—Second semester.

An historical and critical survey of the English language; its nature, origin, and development.

Eng. 102. Old English (3)—First semester.

Readings in Old English. The sounds, morphology, and syntax of Old English are studied with particular reference to the development of Modern English.

Eng. 103. Beowulf (3)—Second semester.

A literary and linguistic study of the Old English epic.

Eng. 104. Chaucer (3)—First semester.

A literary and language study of the Canterbury Tales, Troilus and Criseyde, and the principal minor poems.

Eng. 106. English and Scottish Ballads (3)—Second semester.

An introduction to the ballads in Child's edition. Attention is given to analogues, initiations, American collections, and collecting.

Eng. 110, 111. Elizabethan and Jacobean Drama (3, 3)—First and second semesters.

The most important dramatists of the time, other than Shakespeare.

Eng. 112. Poetry of the Renaissance (3)—First semester.

The chief poets from Skelton to Jonson, with particular attention to Spenser. (Not offered in 1946-47.)

Eng. 113. Prose of the Renaissance (3)—Second semester.

The chief prose writers from More to Bacon. (Not offered in 1946-47.)

Eng. 115, 116. Shakespeare (3, 3)—First and second semesters.

Twenty-one important plays.

Eng. 120. English Drama from 1660 to 1800 (3)—Second semester.

The important dramatists from Etherege to Sheridan, with emphasis upon the comedy of manners.

Eng. 121. Milton (3)—First semester.

The poetry and the chief prose works.

Eng. 122. Literature of the Seventeenth Century (3)—Second semester.

The major literary figures (exclusive of Milton), emphasizing their relation to the philosophical movements of the century.

Eng. 125. Literature of the Eighteenth Century (3)—Second semester.

Prominent poets and prose writers from Swift to Burns.

Eng. 129, 130. Literature of the Romantic Period (3, 3)—First and second semesters.

In the first semester, the literature of revolt in England, with special attention to Wordsworth, Coleridge, Lamb, Hazlitt, and DeQuincey. In the second semester, special attention is given to Byron, Shelley, and Keats.

Eng. 134, 135. Literature of the Victorian Period (3, 3)—First and second semesters.

The chief writers of prose and poetry from the close of the romantic period to the end of the nineteenth century.

Eng. 139, 140. The English Novel (3, 3)—First and second semesters.

The development of the novel; readings in the major novelists of the eighteenth and nineteenth centuries.

Eng. 143. Modern Poetry (3)—First semester.

The chief English, Irish, and American poets of the twentieth century.

Eng. 144. Modern Drama (3)—First semester.

The drama from Ibsen to the present.

Eng. 145. The Modern Novel (3)—Second semester.

Major English and American novelists of the twentieth century.

Eng. 148. The Literature of American Democracy (3)—First semester.

A study of literature which relates closely to the democratic tradition.

Eng. 150, 151. American Literature to 1900 (3, 3)—First and second semesters.

Representative American poetry and prose from colonial times to 1900, with special emphasis on the literature of the nineteenth century.

Eng. 152, 153. American Fiction before 1900 (3, 3)—(Not offered in 1946-47).

The chief American writers of prose fiction from the beginnings to the twentieth century.

Eng. 155, 156. Four Major American Writers (3, 3)—First and second semesters.

Two writers are studied intensively each semester.

Eng. 170. Creative Writing (2)—First semester.

Attention is given to theory and practice. Intended for students who have more than ordinary ability.

Eng. 171. Advanced Creative Writing (2)—Second semester. Prerequisite, Eng. 170 or the permission of the instructor.

A high level of performance is expected; some attention is given to forms not studied in English 170.

Eng. 172. Playwriting (2)—Second semester.

Analysis of plays, and practice in writing at least one short play.

For Graduates

Eng. 200. Thesis (3-6)—(Arranged). Credit in proportion to work done and results accomplished.

Eng. 201. Bibliography and Methods (3)—First semester.

An introduction to the principles and methods of research.

Eng. 202. Middle English (3)—Second semester.

A study of selected readings of the Middle English period with reference to etymology, morphology, and syntax.

Eng. 203. Gothic (3)—(Not offered in 1946-47).

A study of forms and syntax, with readings from the Ulfilas Bible; correlation of the Gothic speech sounds with those of Old English.

Eng. 204. Medieval Romances (3)—First semester.

The Middle English metrical and prose romances and their sources, with emphasis on the Arthurian cycle.

Eng. 206, 207. Seminar in Renaissance Literature (3, 3)—First and second semesters.

Eng. 210. Seminar in Seventeenth-Century Literature (3)—Second semester.

Eng. 212. Seminar in Eighteenth-Century Literature (3)—(Not offered in 1946-47).

Eng. 214. Seminar in Nineteenth-Century Literature (3)—First semester.

Eng. 216, 217. Literary Criticism (3, 3)—First and second semesters.

The practice and theory of criticism from Plato to Croce.

Eng. 225, 226. Major American Writers (3, 3)—(Not offered in 1946-47).

Eng. 227, 228. Problems in American Literature (3, 3)—First and second semesters.

Eng. 230. Studies in American Language (3)—(Not offered in 1946-47).

ENTOMOLOGY

Ent. 1. Introductory Entomology (3)—First and second semester. Two lectures and one three-hour laboratory period a week. Prerequisite, one semester of college Zoology.

The position of insects in the animal kingdom, their gross structure, classification into orders and principal families and the general economic status of insects. A collection of common insects is required. Fee, $3.00.

Ent. 2. Insect Morphology (3)—First semester. One lecture and two laboratory periods a week. Prerequisite, Ent. 1.

Intensive study of the external structures and less intensive study of the internal anatomy of representative insects with special reference to those phases needed for work in insect taxonomy and biology. Fee, $3.00

Ent. 3. Insect Taxonomy (3)—Second semester. Two three-hour laboratory periods a week, occasional lectures. Prerequisite, Ent. 2.

Intensive study of the classification of all orders and the important families based on individual collections supplemented by typical material from the department collection. Fee, $3.00.

Ent. 4. Beekeeping (2)—First semester.

A study of the life history, behavior and seasonal activities of the honeybee, its place in pollination of flowers with emphasis on plants of economic importance and bee lore in literature.

For Advanced Undergraduates

Ent. 55. Advanced Apiculture (3)—Second semester. One lecture and two three-hour laboratory periods a week. Prerequisite, Ent. 4.

The theory and practice of apiary management. Designed for the student who wishes to keep bees or requires a practical knowledge of bee management. Fee, $3.00.

Ent. 101. Economic Entomology (3)—Second semester. Prerequisite, consent of the department.

An intensive study of the theory and problems of applied entomology, including life history, ecology, behavior, distribution, parasitism and control.

Ent. 103, 104. Insect Pests (3, 3)—(Not offered 1946-1947).

Ent. 105. Medical Entomology (3)—First semester. Two lectures and one laboratory period a week. Prerequisite, Ent. 1 or consent of the department.

The relation of the Arthropoda to disease of man, both directly and as vectors of pathogenic organisms. The fundamentals of parasitology and sanitation as they are related to entomology. The control of pests of man. Fee, $3.00.

Ent. 106. Advanced Insect Texonomy (3)—First semester. Two three-hour labortory periods a week. Prerequisite, Ent. 3.

Principles of nomenclature and intensive study of limited groups of insects. Fee, $3.00.

Ent. 107. Insecticides (3)—Second semester. Prerequisite, Ent. 1 and Elementary Organic Chemistry.

The development and use of contact and stomach poisons, fumigants and other important chemicals, with reference to their chemistry, toxic action, compatability, and host injury. Recent research emphasized.

Ent. 109. Insect Physiology (2)—Second semester. Two lectures and occasional demonstrations. Prerequisite, consent of the department.

The functioning of the insect body with particular reference to blood, circulation, digestion, absorption, excretion, respiration, reflex action and the nervous system, and metabolism.

Ent. 110, 111. Special Problems (1, 1)—First and second semesters. Prerequisites, to be determined by the department.

An intensive investigation of some entomological problem, preferably of the student's choice. Required of majors in entomology.

Ent. 112. Seminar (1, 1)—First and second semesters. Prerequisite, senior standing.

Presentation of original work, review and abstracts of literature.

Ent. 113. Photomicography (2)—First semester. Two laboratory periods a week and occasional lectures. Prerequisite, consent of the department.

An elementary course in Photomicography and macrophotography.

For Graduates

Ent. 201. Advanced Entomology—Credit and prerequisites to be determined by the department. First and second semesters.

Studies of minor problems in morphology taxonomy and applied entomology, with particular reference to the preparation of the student for individual research.

Ent. 202. Research—First and second semesters.

Required of graduate students majoring in Entomology. This course involves research on an approved project. A dissertation suitable for publication must be submitted at the conclusion of the studies as a part of the requirements for an advanced degree.

Ent. 203. Advanced Insect Morphology (2, 4)—First semester. Two lectures, additional laboratory work and credit by special arrangement with the department.

Insect anatomy with special reference to function. Given in preparation for advanced work in physiology or research in morphology.

Ent. 205. Insect Ecology (2)—Second semester. One lecture and one three-hour laboratory period a week. Prerequisite, consent of the department.

A study of fundamental factors involved in the relationship of insects to their environment. Emphasis is placed on the insect as a dynamic organism adjusted to its surroundings.

FOODS AND NUTRITION, see page 303.

FOOD TECHNOLOGY, see page 83.

FOREIGN LANGUAGES AND LITERATURES

At the beginning of each semester a placement examination is given for all students who have had some foreign language and wish to do further work in that language. By this means the Department assigns each student to the suitable level of instruction.

Two types of majors are offered in French, German, or Spanish: one for the general student or the future teacher and the other for those interested in a rounded study of a foreign area for the purpose of understanding another nation through its literature, history, sociology, economics, and other aspects.

Literature and Language Major

Language and literature as such are stressed in the first type of major. Specific minimum requirements beyond the first two years are a semester each of intermediate and advanced conversation (Fr., Ger., or Span. 8 and 80), a semester of grammar review (Fr., Ger., or Span. 71), six hours of the introductory survey of literature (Fr., Ger., Span. 75 and 76), and twelve hours in literature courses numbered 100 or above—a total of 26 semester hours. Beyond this minimum further courses in the Department are desirable and as electives work in American and in Comparative Literature is strongly recommended.

Foreign Area Major

The area study major endeavors to provide the student with a knowledge of various aspects of the country whose language he is studying. Specific minimum requirements beyond the first two years are ten hours of conversation, *Life and Culture* (Fr., Ger., or Span. 161 and 162), three hours of *Advanced Composition* (Fr., Ger., or Span. 121) and six hours in literature courses numbered 100 or above—a total of 25 semester hours. In addition the student takes, in lieu of a minor in one department, twenty to thirty-six hours in geography, history, political science, sociology, or economics, distributed through these fields in consultation with advisors in the Foreign Language Department. The student is urged to take some elective work in American and in Comparative Literature.

French

French 1, 2. Elementary French (3, 3)—First and second semesters. Students who offer two units in French for entrance, but whose preparation is not adequate for second-year French, receive half credit for this course.

Elements of grammar; pronunciation and conversation; exercises in composition and translation.

French 3. Elementary Conversation (1)—First and second semesters. Prerequisite, the grade of A or B in French 1. Qualified students who are interested in French should take this course in conjunction with French 2.

A practice course in simple, spoken French.

French 4, 5. Intermediate Literary French (3, 3)—First and second semesters. Prerequisite, French 1 and 2 or equivalent. Second-year French for students interested in literature or in fields related to literature. Students who expect to do major or minor work in French are required, however, to take French 17 in place of the second semester of this course.

Translation; conversation; exercises in pronunciation. Reading of texts designed to give some knowledge of French life, thought, and culture.

French 6, 7. Intermediate Scientific French (3, 3)—First and second semesters. Prerequisite, French 1 and 2 or equivalent. Second-year French for students specializing in the sciences. Students who expect to do major or minor work in French are required, however, to take French 17 in place of the second semester of this course.

Translation; conversation; exercises in pronunciation. Reading of scientific texts.

French 8, 9. Intermediate Conversation (2, 2)—First and second semesters. Prerequisite, consent of instructor.

Practical exercises in conversation, based on material dealing with French life and customs.

French 17. Grammar Review (3)—First and second semesters. Prerequisite, French 4, French 6, or permission of instructor. This course gives the same credit as do French 5 and French 7, and may be taken in place of these courses. Required of second-year French students who expect to major or minor in French.

An intensive review of the elements of French grammar; verb drills; composition; conversation.

For Advanced Undergraduates

French 51, 52. The Development of the French Novel (3, 3)—First and second semesters.

Introductory study of the history and growth of the novel in French literature; of the lives, works, and influence of important novelists. Reports. French 51 covers the 17th and 18th centuries, French 52 the 19th century. (Not offered 1945-46.)

French 53, 54. The Development of the French Drama (3, 3)—First and second semesters.

Introductory study of the French drama. Translation, collateral reading, reports. French 53 covers the seventeenth and eighteenth centuries, French 54 the 19th century.

French 55, 56. The Development of the Short Story in French (3, 3)—First and second semesters.

A study of the short story in French literature; reading and translation of representative examples. (Not given in 1945-46.)

French 61, 62. French Phonetics (2, 2)—First and second semesters. Prerequisite, French 1 and 2.

A practical course in the pronunciation of French: study of phonetics, oral exercises and ear training.

French 71, 72. Intermediate Grammar and Composition (3, 3)—First and second semesters. Prerequisite, French 17 or equivalent.

This course, more advanced than the Grammar Review (French 17), is designed for students who, having a good general knowledge of French, wish to become more proficient in the written and spoken language.

French 75, 76. Introduction to French Literature (3, 3)—First and second semesters. Prerequisite, second-year French or equivalent.

An elementary survey of the chief authors and movements in French literature.

French 80, 81. Advanced Conversation (3, 3)—First and second semesters. Prerequisite, consent of the instructor.

This course is intended for students who have a good general knowledge of French, and who wish to develop fluency and confidence in speaking the language.

French 99. Rapid Review of the History of French Literature (1)—Second semester.

Weekly lectures stressing the high points in the history of French literature. This course provides a rapid review for majors by means of a brief survey of the entire field.

For Graduates and Advanced Undergraduates

French 100. French Literature of the Sixteenth Century (3)—First semester.

The beginning and development of the Renaissance in France.

French 101, 102. French Literature of the Seventeenth Century (3, 3)—First semester and second semester.

First semester, a survey of the great classical writers other than Corneille, Racine, and Molière. Second semester, the significant plays of Corneille, Racine and Molière.

French 103, 104. French Literature of the Eighteenth Century (3, 3)—First and second semesters.

First semester, a study of the drama, poetry, and novels of the period. Second semester, the philosophical and scientific movement from Saint-Evremond and Bayle to the French Revolution.

French 105, 106. French Literature of the Nineteenth Century (3, 3)—First semester, drama and poetry from Symbolism to the present time. Second semester, the contemporary novel.

French 121, 122. Advanced Composition (3, 3)—First and second semesters. Translation from English to French, free composition, and letter writing.

French 161, 162. French Life and Culture (3, 3)—First and second semesters.

An introductory study of the French people: their life and customs, their great men and women, their educational, literary and artistic tradition.

For Graduates

The requirements of students will determine which courses will be offered.

French 201. Research—Credits determined by work accomplished.

French 203, 204. Georges Duhamel, Poet, Dramatist, Novelist (2, 2)—First and second semesters.

French 205, 206. French Literature of the Middle Ages (2, 2)—First and second semesters.

French 207, 208. The French Novel in the First Half of the Nineteenth Century (2, 2)—First and second semesters.

French 209, 210. The French Novel in the Second Half of the Nineteenth Century (2, 2)—First and second semesters.

French 211. Introduction to Old French (3)—Second semester.

French 213, 214. Seminar (2, 2)—First and second semesters.

Required of all graduate students in French.

French 221, 222. Reading Course (2, 2)—One conference a week, first and second semester.

German

German 1, 2. Elementary German (3, 3)—First and second semesters. Students who offer two units in German for entrance, but whose preparation is not adequate for second-year German, receive half credit for this course.

German 3. Elementary Conversation (1)—First and second semesters. Prerequisite, the grade of A or B in German 1.

German 4, 5. Intermediate Literary German (3, 3)—First and second semesters. Prerequisite, German 1, 2, or equivalent.

Reading of narrative prose, grammar review, and oral and written practice.

German 6, 7. Intermediate Scientific German (3, 3)—First and second semesters.

Reading of technical prose, with some grammar review.

German 8, 9. Intermediate Conversation (2, 2)—First and second semesters. Admission by consent of instructor.

The object of this course is to help the student acquire the ability to speak and understand simple colloquial German.

German 17. Grammar Review (3)—First and second semesters.

For students who enter with three or more units in German, but who are not prepared to take German 71.

For Advanced Undergraduates

German 61, 62. German Phonetics (1, 1)—First and second semesters. Prerequisite, German 1, 2, or equivalent.

German 71, 72. German Grammar and Composition (3, 3)—First and second semesters. Prerequisite, German 4, 5, or equivalent.

A thorough study of the more detailed points of German grammar with ample practice in composition work. This course is required of students preparing to teach German.

German 75, 76. Introduction to German Literature (3, 3)—First and second semesters. Prerequisite, German 4, 5, or equivalent.

An elementary survey of the history of German literature.

German 80, 81. Advanced Conversation (3, 3)—First and second semesters. Prerequisite, consent of instructor.

Intensive drill in the spoken language.

German 99. Rapid Review of the History of German Literature (1)—First and second semesters.

Weekly lectures stressing the high points in the history of German literature, art, and music. Rapid review for majors.

For Advanced Undergraduates and Graduates

German 101, 102. German Literature of the Eighteenth Century (3, 3)—First and second semesters.

The earlier and the later classical periods.

German 103, 104. German Literature of the Nineteenth Century (3, 3)—First and second semesters.

Romanticism and young Germany.

German 105, 106. Contemporary German Literature (3, 3)—First and second semesters.

The literature of the Empire and of the Twentieth Century.

German 107, 108. Goethe's Faust (2, 2)—First and second semesters. First and second parts of the drama.

Attention is called to Comparative Literature 106, Romanticism in Germany, and Comparative Literature 107, The Faust Legend in English and German Literature.

German 121, 122. Advanced Composition (3, 3)—First and second semesters. Prerequisite, German 71, 80 or consent of instructor.

Translation from English and German, free composition, and letter writing.

German 161, 162. German Life and Culture (3, 3)—First and second semesters.

Introductory study of the literary, educational, artistic tradition, great men, customs, and general culture. Readings and lectures in vernacular as far as seems expedient.

For Graduates

(The requirements of students will determine which courses will be offered.)

German 201. Research—Credits determined by work accomplished.

German 202, 203. The Modern German Drama (3, 3)—First and second semesters.

German 204. Schiller (3)—First semester.

German 205. Goethe's Works outside of Faust (2)—Second semester.

German 206. The Romantic Movement (3)—Second semester.

German 208. The Philosophy of Goethe's Faust (3)—First semester.

German 210. Seminar (3, 3)—First and second semester.

Required of all graduate students in German.

German 220, 221. Reading Course (2, 2)—First and second semesters.

Designed to give the graduate student the background of a survey of German literature. Extensive outside readings with reports and connecting lectures.

German 230. Introduction to European Linguistics (3)—First semester.

German 231. Middle High German (3)—Second semester.

Spanish

Spanish 1, 2. Elementary Spanish (3, 3)—First and second semester.

Students who offer two units in Spanish for entrance, but whose preparation is not adequate for second-year Spanish, receive half credit for this course.

Spanish 3. Elementary Conversation (1)—First and second semesters. Prerequisite, the grade of A or B in Spanish 1.

A practice course in simple, spoken Spanish.

Spanish 4, 5. Intermediate Spanish (3, 3)—First and second semesters. Prerequisite, Spanish 1, 2, or equivalent. Students who do major or minor work in Spanish are advised to take Spanish 17 in place of the second semester of this course.

Translation, conversation, exercise in pronunciation. Reading of texts designed to give some knowledge of Spanish and Latin-American life, thought, and culture.

Spanish 8, 9. Intermediate Conversation (2, 2)—First and second semesters. Admission by consent of instructor.

The object of this course is to help the student acquire the ability to speak and understand everyday and colloquial Spanish.

Spanish 17. Grammar Review (3)—First and second semesters. Prerequisite Spanish 4 or consent of instructor. Designed particularly for students who enter with three or more units in Spanish, who expect to do advanced work in the Spanish language and literature, but who are not prepared to take Spanish 71.

An intensive review of the elements of the Spanish grammar, verb drills, composition.

Spanish 61, 62. Spanish Phonetics (1, 1)—First and second semesters. Prerequisite, Spanish 1, 2, or equivalent, or consent of instructor.

A practical course in the pronunciation of Spanish; study of phonetics, oral exercises and ear training.

Spanish 71, 72. Review Grammar and Composition (3, 3)—First and second semester. Prerequisite, Spanish 4, 5, or equivalent.

This course is more advanced than Spanish 17 and is designed to give the students a thorough training in the structure of the language. It is also intended to give an intensive and practical drill in Spanish composition.

Spanish 75, 76. Introduction to Spanish Literature (3, 3)—First and second semesters. Prerequisite, Spanish 4, 5, or equivalent.

An elementary survey of the history of Spanish literature.

Spanish 80, 81. Advanced Conversation (3, 3)—First and second semesters. Prerequisite, Spanish 8, 9, or consent of instructor. This course is more advanced than Spanish 8 and 9 and is intended to give the students the ability to speak fluently about subjects of general interest.

Spanish 99. Rapid Review of the History of Spanish Literature (1)—Second semester.

Weekly lectures stressing the leading concepts in the History of Spanish Literature. Especially designed for majors.

For Graduates and Advanced Undergraduates

Spanish 101. Epic and Ballad (3)—First semester.

The legends and heroic matter of Medieval Spain.

Spanish 104. The Drama of the Golden Age (3)—First semester.

Spanish 105. The Spanish Novel of the Golden Age (3)—Second semester.

Spanish 106. The Poetry of the Golden Age (3)—First semester.

Spanish 107. The Spanish Mystics (3)—Second semester.

Spanish 108. Lope de Vega (3)—First semester.

Spanish 109. Cervantes (3)—Second semester.

Spanish 110. The Poetry of the XIXth Century (3)—First semester.

Spanish 111. The Novel of the XIXth Century (3)—Second semester.

Spanish 112. The Drama of the XIXth Century (3)—Second semester.

Spanish 113. The Novel of the XXth Century (3)—First semester.

Spanish 114. The Poetry of the XXth Century (3)—First semester.

Spanish 115. Spanish Thought in the XXth Century (3)—First semester. Essays and critical writings of the XXth Century. The Generation of 1898.

Spanish 116. The Drama of the XXth Century (3)—Second semester.

Spanish 121, 122. Advanced Composition (3,3)—First and second semester.

Translation from English to Spanish, free composition, letter writing.

Spanish 151. Latin-American Novel (3)—First semester.

Spanish 152. Latin-American Poetry (3)—Second semester.

Spanish 153. Latin-American Essay (3)—First semester.

Spanish 161, 162. Spanish Life and Culture (3, 3)—First and second semesters.

Introductory study of the literary, educational, artistic traditions, great men, customs and general culture. Readings and lectures in vernacular as far as seems expedient.

Spanish 163, 164. Latin-American Civilization (3, 3)—First and second semesters.

Introductory study of the literary, educational, artistic traditions, great men, customs and general culture. Readings and lectures in vernacular as far as seems expedient.

For Graduate Students

Spanish 201. Research—Credits determined by work accomplished.

Spanish 202. The Golden Age in Spanish Literature (3)—First semester.

Spanish 203, 204. Spanish Poetry (3, 3)—First and second semesters.

Spanish 210. Seminar—(Arranged.)

Spanish 213. Introduction to Old Spanish (3)—Second semester.

Spanish 221, 222. Reading Course—(Arranged.)

FRENCH, see page 280.

HEBREW

Hebrew 1, 2. Elementary Hebrew (3, 3)—First and second semesters. Elements of grammar; pronunciation and conversation; exercises in composition and translation.

Hebrew 4, 5. Intermediate Hebrew (3, 3)—First and second semesters. Prerequisite, Hebrew 1 and 2, or equivalent.

Translation; conversation; exercises in pronounciation. Reading of texts designed to give some knowledge of Hebrew life, thought, and culture.

ITALIAN

Italian 1, 2. Elementary Italian (3, 3)—First and second semesters.

Open to freshmen. Also recommended for advanced students in French and Spanish.

Elements of grammar; pronunciation and conversation; exercises in composition and translation.

Italian 3. Elementary Conversation (1)—First and second semesters. Prerequisite, the grade of A or B in Italian 1.

A practice course in simple, spoken Italian.

PORTUGUESE

Portuguese 1, 2. Elementary Portuguese (3, 3)—First and second semesters.

Drill in pronunciation and in the elements of grammar; composition and translation.

Portuguese 3. Elementary Conversation (1)—Prerequisite, the grade of A or B in Portuguese 1. Qualified students who are interested in Portuguese should take this course in conjunction with Portuguese 2.

A practice course in simple, spoken Portuguese.

RUSSIAN

Russian 1, 2. Elementary Russian (3, 3)—First and second semesters.

Elements of grammar; composition; pronunciation and translation.

Russian 3. Elementary Conversation (1)—Prerequisite, the grade of A or B in Russian 1. Qualified students who are interested in Russian should take this course in conjunction with Russian 2.

Russian 4, 5. Intermediate Russian (3, 3)—First and second semesters. Prerequisite, Russian 1 and 2, or equivalent.

Translation; conversation; exercises in pronunciation. Reading of texts designed to give some knowledge of Russian life, thought, and culture.

GEOGRAPHY

Geog. 4. Regional Geography of the Continents (2)—First semester.

Classification of each continent into regions and description of the physical conditions and economic activities in each region; intended especially for teachers.

Geog. 30. Principles of Physical Geography (3)—First semester.

A study of the forms of the land: the principal processes affecting the earth surface; types of land forms, their development, their geographic distribution and their economic importance.

Geog. 41. Weather and Climate (3)—Second semester.

Elements of the weather and climatic regions of the world.

Geog. 50, 51. Map Interpretation and Field Work (1, 1)—First and second semesters.

Study in laboratory class and in field of various types of maps and other means of presenting geographic materials.

Geog. 60, 61. Economic Geography (2, 2)—First and second semesters.

Primarily for majors and minors in Geography; recommended for students in the social sciences; open to sophomores by permission of instructor. The economic and social organization of productive occupation types—hunting and fishing, forest industries, grazing, farming, mining, manufacturing and trade.

For Advanced Undergraduates and Graduates

Geog. 100, 101. Regional Geography of the United States and Canada (3, 3)—First and second semesters. Prerequisites, Econ. 1 2, or NHR 60, 61, or permission of instructor.

The climate, land forms, soils and minerals, forests, agriculture, industries, and commerce; the people and their occupations, by regions. Several all day field trips are required.

Geog. 102. The Geography of Manufacturing in the United States and Canada (3)—First semester.

The geographic factors which are associated with the location of manufacturing industries. One or more field trips.

Geog. 110. Middle America (2)—First semester.

Regional geography of Mexico, Central America and the islands of the Caribbean; an analysis of the physical and human resources.

Geog. 111. South America (2)—Second semester.

Regional geography of the South American republics; an analysis of the physical and human resources.

Geog. 112, 113. Recent Economic Trends in Latin America (2, 2)—First and second semesters.

An analysis of the improvements and expansion in grazing and farming, increased exploitation of mineral resources and industrialization.

Geog. 115. The Peoples of Latin America (3)—Second semester.

Population distribution, composition and growth, trends in fertility and mortality; migration, rural-urban and interregional, cultural, ethnic and political aspects.

Geog. 120, 121. Economic Geography of Europe (3, 3)—First and second semesters.

Physical resources, agricultural and industrial development; major economic regions and trade relations between regions and countries.

Geog. 122. Economic Resources and Development of Africa (3)—First semester.

Physical Resources and the existing stage of economic development, economic potentialities.

Geog. 123. Problems of Colonial Geography (3)—Second semester.

Problems of development of colonial areas, with special emphasis upon the development of tropical regions and the possibilities of white settlement in the tropics.

Geog. 130. The Natural Resources of the Chinese Republic, Korea, and Japan (2)—First semester.

A brief review of the land relief, climate, soil and mineral resources.

Geog. 131. The Human Resources and Industrial Development of the Chinese Republic, Korea, and Japan (2)—Second semester.

Population in relation to land resources, progress in scientific and economic technique, and prospect for industrial development.

Geog. 132. The Natural Resources of India and the East Indies (2)—First semester.

A brief review of the land relief, climate, soil and mineral resources.

Geog. 133. The Human Resources and Industrial Development of India and the East Indies (2)—Second semester.

Population in relation to land resources, progress in scientific and economic technique, and prospect for industrial development.

Geog. 135. The Human Geography of the Chinese Republic (3)—Second semester.

A brief description of the economic, social, and political institutions in the various regions of the Chinese Republic.

Geog. 140, 141. The Natural Resources of the Union of Socialist Soviet Republics (3, 3)—First and second semesters.

For Graduates

Geog. 203. Geomorphology (3)—Second semester.

An advanced comparative study of selected geomorphic processes and land forms; theories of land form evolution and geomorphological problems.

Geog. 206. Micro-Climatology (3)—First semester.

The climates of the layer of air near the ground in which plants live.

Geog. 207. Advanced General Climatology (3)—Second semester.

A study of the climates of the United States.

Geog. 220, 221. Seminar in Geography (Credit to the arranged)—First and second semesters.

Geog. 222, 223. Research Work (Credit to be arranged)—First and second semesters and summer.

In addition to individual research projects, the preparation of the "Economic Atlas of the World," a joint project of the University of Maryland and the United States Department of Agriculture, provides facilities for graduate students to study under the guidance of experts in government departments, particularly in the Department of Agriculture, as well as in the University. It also provides a vehicle of publication for part of all of such research work. The sections of the Atlas in preparation during 1946-47 are wheat, rice, land utilization and population; also a revision of the "Geography of the World's Agriculture".

GEOLOGY

Geol. 1. Geology (3)—Prerequisite, Chem. 1, 3.

A study dealing primarily with the principles of dynamical and structural geology. Designed to give a general survey of the rocks and minerals composing the earth; the movement within it, and its surface features and the agents that form them.

Geol. 2. Engineering Geology (2).

The fundamentals of geology with engineering applications.

HISTORY

H. 1, 2. History of Modern Europe (3, 3)—First and second semesters. The basic course, prerequisite for all advanced courses in European History.

A study of European History from the Renaissance to the present day.

H. 3, 4. History of England and Great Britain (3, 3)—First and second semesters. For freshmen and sophomores; open to upper classmen by special arrangement.

H. 5, 6. History of American Civilization (3, 3)—First and second semesters. Required for graduation of all students who enter the University after 1944-45. Normally to be taken in the sophomore year. See page 24. for further explanation.

For Graduates and Advanced Undergraduates

A. American History

H. 101. American Colonial History (3)—(Not offered in 1946-47). Prerequisites, H. 5, 6, or the equivalent.

The settlement and development of colonial America to the middle of the eighteenth century.

H. 102. The American Revolution (3)—(Not offered in 1946-47). Prerequisites, H. 5, 6, or the equivalent.

The background and course of the American Revolution through the formation of the Constitution.

H. 105, 106. Social and Economic History of the United States to 1860 (3, 3)—First and second semesters. Prerequisites H. 5, 6 or the equivalent.

A synthesis of American life from the colonial period to the present.

H. 107. Social and Economic History of the United States, 1860-1900 (3)—First semester. Prerequisites H. 5, 6, or the equivalent.

The development of American life and institutions, with emphasis upon the period since 1876.

H. 108. The United States in the Twentieth Century (3)—(Not offered in 1946-47). Prerequisites, H. 5, 6, or the equivalent. Second semester.

A study of the outstanding social and economic problems and of the cultural changes of the last fifty years.

H. 115. The Old South (3)—First semester. Prerequisites, H. 5, 6, or the equivalent.

A study of the institutional and cultural life of the ante-bellum South with particular reference to the background of the Civil War.

H. 116. The Civil War and Reconstruction (3)—Second semester. Prerequisites, H. 5, 6, or the equivalent.

Military aspects; problems of the Confederacy; political, social, and economic effects of the war upon American society. Post-bellum problems of reconstruction in North and South.

H. 121, 122. History of the American Frontier (3, 3)—First and second semesters. Prerequisites, H. 5, 6, or the equivalent.

A study of the influence of the westward movement in shaping American institutional development. First semester, the trans-Alleghany West; second semester, the trans-Mississippi West.

H. 127, 128. Diplomatic History of the United States (3, 3)—(Not offered in 1946-47). Prerequisites, H. 5, 6, or the equivalent. First and second semesters.

An historical study of the diplomatic negotiations and foreign relations of the United States. First semester, from the Revolution to the Civil War; second semester, from the Civil War to the present.

H. 129. The United States and World Affairs (3)—Second semester. Prerequisites, H. 5, 6, or the equivalent.

A consideration of the changed position of the United States with reference to the rest of the world since 1917.

H. 133, 134. The History of American Ideas (3, 3)—First and second semesters. Prerequisites, H. 5, 6, or the equivalent.

An intellectual history of the American people, embracing such topics as religious liberty, democracy, and social ideas.

H. 135, 136. Constitutional History of the United States (3, 3)—(Not offered in 1946-47). Prerequisites, H. 5, 6, or the equivalent.

A study of the historical forces resulting in the formation of the Constitution, and the development of American constitutionalism in theory and practice thereafter.

H. 141, 142. History of Maryland (3, 3)—(Not offered in 1946-47). Prerequisites, H. 5, 6, or the equivalent.

First semester, a survey of the political, social and economic history of colonial Maryland. Second semester, Maryland's historical development and role as a state in the American Union.

H. 145, 146. Latin-American History (3, 3)—First and second semesters. Prerequisites, 6 hours of fundamental courses.

A survey of the history of Latin America from colonial origins to the present, covering political, cultural, economic, and social development, with special emphasis upon relations with the United States.

B. European History

H. 151, 152. History of the Ancient Orient and Greece (3, 3)—(Not offered in 1946-47).

First semester, a survey of the ancient empires of Egypt and Near East, with some attention to their economics, life and culture; second semester, a similar treatment of Greek history and culture.

H. 153. History of Rome (3)—(Not offered in 1946-47).

A study of Roman civilization from the earliest beginnings through the Republic and down to the last centuries of the Empire.

H. 155. Medieval Civilization (3)—(Not offered in 1946-47). Prerequisite, H. 1, 2, or the permission of the instructor.

First semester, from the fall of the Roman Empire to the thirteenth century.

H. 161. The Foundations of Modern Culture (3)—(Not offered in 1946-47). Prerequisites, H. 1, 2, or the permission of the instructor.

The Renaissance and Reformation. Cultural achievements in the Sciences, the Arts, and Literature to the middle of the 17th Century.

H. 165, 166. Revolutionary and Napoleonic Europe (3, 3)—First and second semesters. Prerequisites, H. 1, 2, or the equivalent.

The Old Regime in France and Europe; the changes effected by the French Revolution; the Napoleonic regime and the balance of power 1789-1815.

H. 171, 172. Europe in the Nineteenth Century, 1815-1919 (3, 3)—(Not offered in 1946-47). Prerequisites, H. 1, 2, or the equivalent.

A study of the political, economic, social and cultural development of Europe from the Congress of Vienna to the First World War.

H. 175, 176. Europe in the Twentieth Century (3, 3)—(Not offered in 1945-46.) Prerequisites H. 1, 2, or the equivalent.

A study of the political, economic, social and cultural development of Europe with special emphasis on the factors involved in the two World Wars.

H. 179, 180. Diplomatic History of Europe Since 1871 (3, 3)—(Not offered in 1946-47). Prerequisites, H. 1, 2, or the equivalent.

A study of European diplomacy, imperialism and power politics since the Franco-Prussian War.

H. 181, 182. History of Central Europe (3, 3)—(Not offered in 1946-47). Prerequisites, H. 1, 2, or the equivalent.

The history of Central Europe from 1600 to the present, with special emphasis on Germany and Austria.

H. 185, 186. History of the British Empire (3, 3)—(Not offered in 1946-47). Prerequisites, H. 1, 2, or the equivalent.

First semester, the development of England's Mercantilist Empire and its fall in the war for American Independence (1783); second semester, the rise of the Second British Empire and the solution of the problem of responsible self-government, 1783-1867; the evolution of the British Empire into a Commonwealth of Nations, and the development and problem of the dependent Empire.

H. 191. History of Russia (3)—(Not offered in 1946-47). Prerequisites, H. 1, 2, or the equivalent.

A history of Russia from the earliest times to the present day.

H. 193. History of the Near East (3)—First semester. Prerequisites, H. 1, 2, or the equivalent.

A study of the Balkans and of Turkey from earliest times to the present.

H. 195. The Far East (3)—Second semester.

A survey of institutional, cultural and political aspects of the history of China and Japan, and a consideration of present-day problems of the Pacific area.

H. 199. Proseminar in Historical Writing (3)—Second semester.

Discussions and term papers designed to acquaint the student with the methods and problems of research and presentation. The students will be encouraged to examine those phases of history in which they are most interested. Required of history majors in senior year.

For Graduates

H. 200. Research (3-6)—Credit proportioned to the amount of work. (Arranged.)

H. 201. Seminar in American History (2)—(Arranged.)

H. 205, 206. Topics in American Economic and Social History (3, 3)—(Arranged.)

Readings and conferences on the critical and source materials explaining our social and economic evolution.

H. 211. The Colonial Period in American History (3)—(Arranged.)

Readings and conferences designed to familiarize the student with some of the sources and the classical literature of American Colonial History.

H. 215. The Old South (3)—(Arranged.)

Readings and conferences designed to familiarize the student with some of the standard sources and the classical literature of the ante-bellum South.

H. 216. The American Civil War (3)—(Arranged.)

Readings and conferences on the controversial literature of the Civil War. Attention is focused upon the conflicting interpretations and upon the social and economic impact of the war on American society. Opportunity is also given to read in the rich source material of this period.

H. 221, 222. History of the West (3, 3)—(Arranged.)

Readings and conferences designed to give the student an acquaintance with some of the more important sources and some of the most significant literature of the advancing American frontier.

H. 233, 234. Topics in American Intellectual History (3, 3)—(Arranged.)

Readings and conferences on selected phases of American thought, with emphasis on religious traditions, social and political theory, and the development of American ideas.

H. 250. Seminar in European History (2)—(Arranged.)

H. 255. Medieval Culture and Society (3)—(Arranged.)

Readings and conferences designed to acquaint the student with the important literature and interpretations on such topics as feudalism, the medieval Church, schools and universities, Latin and vernacular literatur art and architecture.

H. 281. Topics in the History of Central Europe (3)—(Arranged.)

Readings and conferences in the history of Central Europe from Bismarc to the present, to acquaint the student with the leading primary an secondary sources. Special emphasis will be placed on the Bismarckian and Hitlerian periods.

H. 285, 286. Topics in the History of Modern England and Greater Britain (3, 3)—(Arranged.)

Readings and conferences on the documentary and literary materials dealing with the transformation of England and the growth and evolution of the British Empire since 1763.

H. 287. Historians and Historical Criticism (3)—(Arranged.)

Readings and occasional lectures on the history of historical writing, the evolution of critical standards, the rise of auxiliary sciences, and the works of selected masters.

HOME ECONOMICS

Art, see pages 177, 220.
Foods and Nutrition, see page 301.
Home Economics Education, see page 258.
Home and Institution Management, see page 181.
Practical Arts and Crafts, see page 177.
Textiles and Clothing, see page 175.

H. E. 1. Home Economics Lectures (1)—First semester. Required of Home Economics freshmen.

Lectures, demonstrations, group and individual discussions on grooming and clothing budget for the college girl; personal adjustments; good study habits; social usage.

H. E. 2. Home Economics for Men (3)—Second semester.

Selection and care of clothing, considering design, durability and propriety to occasion. Selection of food for better nutrition, interesting menus and economy; analysis of accepted demeanor for host and guest. Selection and repair of household appliances; family budgeting and family relationships.

TEXTILES AND CLOTHING

Tex. 1. Textiles (3)—First and second semesters. Two lectures and one laboratory period a week.

Study of textile fibers; standardization and labeling of textiles; collection and analysis of fabrics.

Clo. 20a. Clothing Construction (3)—First and second semesters. Prerequisite: Tex. 1. Three laboratory periods a week.

Interpretation and use of commercial patterns; construction of garments adapted to students with sewing experience.

Clo. 20b. Clothing Construction (3)—First and second semesters. Prerequisite: Tex. 1. Three laboratory periods a week.

Interpretation and use of commercial patterns; construction of garments adapted to students without sewing experience.

Clo. 21. Personal Problems in Clothing (2)—First semester.

Care of clothing; wardrobe planning; selection and purchase of accessories and ready-to-wear.

Clo. 22. Clothing Construction (2)—Second semester. Two laboratory periods a week.

Continuation of Clo. 20a. or 20b. Construction of garments, including a renovation problem.

Courses for Advanced Undergraduates and Graduates

Tex. 100. Advanced Textiles (3)—Second semester. One lecture and two laboratory periods a week. Prerequisites: Tex. 1, Organic Chem.

Detailed study of physical and chemical properties of fibers; of standard testing methods for serviceability of fabrics; of textile finishes; of color application; of laundering and dry cleaning.

Tex. 101 Problems in Textiles (3)—First semester. One lecture and two laboratory periods a week. Prerequisite: Tex. 100, Organic Chem. Individual experimental problems in textiles.

Tex. 105. Consumer Problems in Textiles (3)—Second semester. Two lectures and one laboratory period a week. Prerequisite: Tex. 1 or equivalent.

Economic and trade conditions that affect consumer-trade relationships; buying guides for purchase of household linens and clothing; performance tests of fabrics.

Tex. 108. Decorative Fabrics (2)—One lecture and one laboratory period a week.

Study of historic and contemporary fabrics and laces.

Clo. 120. Draping (3)—First and second semesters. Three laboratory periods a week. Prerequisites: Tex. 1, Clo. 20a.

Demonstrations and practice in creating costumes in fabrics on individual dress forms; modeling of garments for class criticism.

Clo. 121. Pattern Design (2)—First and second semester. Two laboratory periods a week. Prerequisite: Clo. 20a or b, Pr. Art 20.

Development and use of a basic pattern in dress making.

Clo. 122. Tailoring (2)—First and second semesters. Two laboratory periods a week. Prerequisite: Clo. 20a or b.

Construction of tailored garments requiring professional skill.

Clo. 123. Children's Clothing (2)—First semester. One lecture and one laboratory period a week. Prerequisites: Clo. 20a or b, or equivalent.

Children's clothing from the standpoint of age, health, beauty, economy and personality; development of original designs.

Clo. 124. Projects and Reading in Textiles and Clothing (2)—Second semester.

Special projects; survey of current literature in the field or related fields.

For Graduates

Tex. 200. Special Studies in Textiles (2-4)

Clo. 220. Special Studies in Clothing (2-4)

Tex. and Clo. 230. Seminar (1, 1)

Tex. and Clo. 231. Research

PRACTICAL ART AND CRAFTS

The Department of Practical Art reserves the right to retain one art problem, from each student, from each class, for illustrative purposes; however, it will retain only such problems as are needed by the department.

Pr. Art. 0. Professional Lectures (0)—Second semester.

Lectures by current merchandisers and designers.

Pr. Art 1. Design (3)—First and second semesters.

Art expression through the use of materials, such as opaque water color, wet clay, colored chalk, and lithograph crayon, which are conducive to free techniques. Elementary lettering, action figures, abstract design and general composition study. Consideration of art as applied to daily living. Teaching methods are emphasized in the section for art education students.

Pr. Art 2. Survey of Art History (2)—First semester.

A rapid survey of art, from prehistoric times to the twentieth century, showing the great human movements and art ideals, which each period has reflected. Emphasis is given to the philosophy and significance of art in today's living. Illustrated lectures; assigned readings, examinations. Field trips when transportation permits.

Pr. Art 3. Creative Art Inspired by Primitive Art (2)—First semester. Two laboratory periods a week. Prerequisites, Pr. Art 2, or consent of the instructor.

Modern design produced after the study of vigorous primitive art as found in the prehistoric art of Spain, France, and the Southwestern part of the United States; archaic Mesopotamia, Egypt, and Greece; Mayan, Aztec, and Peruvian cultures; past and present primitive tribes; provincial and peasant groups.

Pr. Art 4. Three-dimensional Design (2)—Second semester. Two laboratory periods a week. Prerequisite, Pr. Art 1, or equivalent.

Abstract and symbolic design emphasizing mass, volume, and depth in construction problems, which utilize paper, cork, screen, wire, thin sheet metal, fabric, wood, plastics, etc. This course stimulates resourcefulness and imagination in design; it is especially valuable to persons interested in display.

Pr. Art 20. Costume Design (3)—First and second semesters. Three laboratory periods a week. Prerequisite, Pr. Art 1, or equivalent.

Clothing selection with relation to personality. Adaptation of changing fashions to the individual. Designing of costumes in mediums, such as Conte and lithograph crayon, transparent and opaque water color, soft pencil, India ink, and three-dimensional materials. A minimum of fashion figure drawing. Survey of historic costume and of the fashion industry.

Pr. Art. 21, 22. Action Drawing (2, 2)—Second semester. Two laboratory periods a week. Prerequisite, Pr. Art 1, or equivalent.

Quick sketching of live model, from poses and action. This course is basic for costume illustration and mural painting. Pr. Art 21 prerequisite to Pr. Art 22.

Pr. Art 30. Typography and Lettering (3)—Second semester. Prerequisite, Pr. Art 1, or equivalent.

A study of typography, hand lettering, and their application. Brief survey of processes of reproduction.

Pr. Art 38, 39. Photography (2, 2)—First and second semesters. Two laboratory periods a week. Prerequisites, Pr. Art 1, or equivalent, and consent of the instructor.

Experimental effects in photography with special emphasis upon pictures for advertisements, store display, murals and salon exhibits.

Cr. 2, 3. Simple Crafts (2, 2)—Second semester. Two laboratory periods a week.

Creative art expressed in clay modeling, plaster carving, wood burning, thin metal working, paper mache modeling, etc. Emphasis is laid upon inexpensive materials and tools and simple techniques, which can be pursued in the home. Excellent for teachers and directors of recreation centers.

Cr. 5, 6. Puppetry (2, 2)—Second semester. Two laboratory periods a week.

Making of marionettes and production of simple puppet shows. Offered 1947-48.

Cr. 20, 21. Ceramics (2, 2)—First and second semesters. Two laboratory periods a week. Prerequisite, Pr. Art 1 or Cr. 2, if possible.

Elementary pottery-making, modeling in relief, intaglio and in the round, simple glaze effects. Good design is stressed.

Cr. 30, 31. Metalry (2, 2)—First and second semesters. Two laboratory periods a week. Prerequisite, Pr. Art 1, or Cr. 2, if possible.

Etching, repousse, and sawed filigree in metals, such as copper, aluminum, brass, pewter and German silver. Good design is stressed.

Cr. 40, 41. Weaving (2; 2)—First and second semesters. Two laboratory periods a week. Prerequisite, Pr. Art 1, if possible.

Hand weaving on simple looms. Good color, texture, and general design are stressed.

Courses for Advanced Undergraduates and Graduates

Pr. Art 100, 101. Mural Design (2, 2)—First and second semesters. Two laboratory periods a week. Prerequisites, Pr. Art 1, 2, 3, 21, or consent of the instructor.

Consideration of mural design with relation to propriety of setting. Study of traditional and contemporary techniques. Experiment in colored chalk, gouash, oil paint, and fresco; stone, glass, and tile mosaic, when available.

Pr. Art 102, 103. Advanced Mural Design (2, 2)—First and second semesters. Two laboratory periods a week. Prerequisites, Pr. Art 1, 2, 3, 21, 100, 101.

Advanced techniques in mural design.

Pr. Art 120, 121—Costume Illustration (2, 2)—First and second semesters. Two laboratory periods a week. Prerequisites, Pr. Art 1, 20, and 21, 22, if possible.

Advanced techniques in rendering of fashion illustration. Experience in use of Ben Day and Craftint. Organization of fashion shows.

Pr. Art 124, 125. Individual Problems in Costume (2, 2)—First and second semesters. Two laboratory periods a week. Prerequisites, Pr. Art 1, 20, 120, 121, and permission of the instructor.

Advanced problems in costume design or costume illustration for students who are capable of independent work.

Pr. Art 132. Advertising Layout (2)—First semester. Prerequisites, Pr. Art 1, 20, 30, and 21, 22 if possible.

Rough layouts and finished advertisements utilizing lettering, type specifications, and illustration. Air brush used in large work.

Pr. Art 134, 135. Individual Problems in Advertising (2, 2)—First and second semesters. Two laboratory periods a week. Prerequisites, Pr. Art 1, 20, 30, 120, 132, or equivalent, and permission of the instructor.

Advanced problems in advertising for students who are capable of independent work.

Pr. Art 136. Merchandise Display (2)—First and second semesters. Two laboratory periods a week. Prerequisites, Pr. Art 1, 20, 30; 120, 132 to precede or parallel.

Practice in effective display of merchandise. Cooperation with retail establishments.

Pr. Art 137. Advanced Merchandise Display (2)—First and second semesters. Two laboratory periods a week. Prerequisites, Pr. Art 1, 20, 30, 120, 132, 136 and permission of the instructor.

Advanced problems in the display of merchandise. Emphasis upon original atmospheric effects, which are within the bounds of good taste.

Pr. Art 138, 139. Advanced Photography (2, 2)—First and second semesters. Two laboratory periods a week. Prerequisites, Pr. Art 1, 38, 39.

Advanced problems in photography.

Pr. Art 140, 141. Interior Design (3, 3)—First semester, two lectures and one laboratory per week; second semester, three laboratory periods per week. Prerequisites, Pr. Art 1, or equivalent.

Analysis of interiors as backgrounds for various personalities. Study of good and poor interiors. Historical lectures and readings on evolution of domestic architecture, furniture, household fabrics, and accessories. When transportation permits, trips to historic homes, a furniture factory, and retail house furnishing establishments. Original floor plans and wall elevations drawn to scale and rendered in color. Students who have taken Pr. Art 2, Survey of Art History, will take only the laboratory for Pr. Art 140.

Pr. Art 142, 143. Advanced Interior Design (2, 2)—First and second semesters. Two laboratory periods a week. Prerequisites, Pr. Art 1, 140, 141, or equivalent.

Designing of rooms and furnishings; scale drawing and color rendering in plan, elevation and perspective, or making of maquettes. Study of furniture manufacture and merchandising. Planning of exhibition rooms or houses when possible.

Pr. Art 144, 145. Individual Problems in Interior (2, 2)—First and second semesters. Two laboratory periods a week. Prerequisites, Pr. Art 1, 140, 141, 142, 143, and permission of the instructor.

Advanced problems in interior design or construction for students who are capable of independent work.

Pr. Art 198. Store Experience (3)—160 clock hours, or 20 continuous eight-hour days, summer following the Junior Year, Practical Art curriculum..

Selling, buying, advertising, or executive work, done under supervision in a specified department store or studio. Arrangements to be made with the Head of the Department of Practical Art at registration for the spring semester, Junior year.

Cr. 120, 121. Advanced Ceramics (2, 2)—First and second semesters. Two laboratory periods a week. Prerequisites: Cr. 20, 21.

Advanced techniques in ceramics; preparation of glazes and handling of the kiln.

Cr. 124, 125. Individual Problems in Ceramics (2, 2)—First and second semesters. Two laboratory periods a week. Prerequisites, Cr. 20, 21, 120, 121, and permission of the instructor.

Advanced problems in ceramics. For students who are capable of independent work.

Cr. 130, 131. Advanced Metalry (2, 2)—First and second semesters. Two laboratory periods a week. Prerequisites, Cr. 30, 31.

Advanced techniques in metalry, including soldering, stone-setting, and fine etching.

Cr. 134, 135. Individual Problems in Metalry (2, 2)—First and second semesters. Two laboratory periods a week. Prerequisites, Cr. 30, 31, 130, 131, and permission of the instructor.

Advanced problems in Metalry for students who are capable of independent work.

Cr. 140, 141. Advanced Weaving (2, 2)—First and second semesters. Two laboratory periods a week. Prerequisites, Cr. 40, 41.

Advanced techniques in weaving.

Cr. 144, 145. Individual Problems in Weaving (2, 2)—First and second semesters. Two laboratory periods a week. Prerequisites, Cr. 40, 41, 140, 141, and permission of the instructor.

Advanced problems in weaving for students who are capable of independent work.

Cr. 198. Crafts in Therapy (2)—Second semester. Prerequisites, three courses in various crafts or art construction, consent of the instructor and junior standing.

Demonstration and discussion of the teaching of crafts to persons, who need physical and mental rehabilitation. Readings, field trips, a minimum of art activity. Excellent for persons who plan to work with persons such as disabled war veterans.

HOME ECONOMICS EXTENSION

H. E. Ext. 100. Methods in Home Economics Extension (3)—Second semester.

Three lectures. Given under the direction of Venia M. Kellar and specialists. Students must have senior standing in the College of Home Economics.

HOME AND INSTITUTION MANAGEMENT

Home Mgt. 150, 151. Management of the Home (3, 3)—First and second semesters.

The family and human relations; household organization and management; planning of time and money; housing as a social problem; selection and care of household equipment and furnishings.

Home Mgt. 152. Practice in Management of the Home (3)—First and second semesters. Prerequisite, Home Mgt. 150, 151.

Six weeks experience in planning, guiding, directing and coordinating the activities of a household, composed of a faculty member and a small group of students.

Inst. Mgt. 160. Institution Organization and Management (3)—First semester. Two lectures and one laboratory period a week. Prerequisites, Foods 2, 3; Home Mgt. 150, 151 to precede or parallel.

The principles of scientific organization and management applied to institution administration, personnel management, and supervision of food services.

Inst. Mgt. 161. Institution Purchasing and Accounting (3)—Second semester. Two lecturers and one laboratory period a week.

Purchasing of food, supplies, and equipment for institutional use, and the principles involved in accounting as applied to food services.

Inst. Mgt. 162. Institution Foods (3)—Second semester. One lecture and two laboratory periods a week. Prerequisites, Foods 2, 3; Inst. Mgt. 160, 161.

Practical experience in preparing and serving food for large groups, including the use of standard recipes, calculation of food costs, use of institution equipment, and menu planning.

Inst. Mgt. 163. Practice in Institution Management (3)—Arranged. Three laboratory periods a week. Prerequisites, Inst. Mgt. 160, 161.

Practice work in food service under supervision.

Inst. Mgt. 164. Advanced Institution Management (2)—Second semester. One lecture and one laboratory period a week. Prerequisites, Inst. Mgt. 160, 161, 162.

Special problems in institution management.

Inst. Mgt. 165. The School Lunch (3)—Second semester. Two lectures and one laboratory period a week. Prerequisites, Foods 2, 3; Nut. 110, or equivalent.

Problems relating to the planning, organization and serving of the noon meal in schools and in child care centers.

FOODS AND NUTRITION

Foods 1. Introductory Foods (3)—First and second semesters. Three laboratory periods a week.

For students in other colleges and for majors in Textiles and Clothing, and Practical Art.

Foods 2, 3. Foods (3, 3)—First and second semesters. One lecture and two laboratory periods a week. Prerequisite, General Chemistry, Chem. 11, 13.

Composition, selection and preparation of food with a study of the scientific principles involved. Analysis of recipes and study of standard products.

Nut. 10. Elements of Nutrition (3)—First and second semesters.

For students in other colleges and for majors in Textiles and Clothing and Practical Art.

For Advanced Undergraduates and Graduates

Foods 100. Food Economics (2)—First semester. Prerequisite, Foods 1 or 3. One lecture and one laboratory period a week.

Sources of our food supply; buying of food for the family.

Foods 101. Meal Service (2)—First and second semesters. Two laboratory periods a week. Prerequisite, Foods 1 or 3.

Planning and serving meals for family groups considering nutritional needs, and cost; includes simple entertaining.

Foods 102. Experimental Foods (3)—First semester. One lecture and two laboratory periods a week. Prerequisites, Organic Chemistry; Foods 3.

A study of food preparation processes from the experimental viewpoint.

Foods 103. Demonstrations (2)—First semester. Two laboratory periods a week. Prerequisites, Tex. 1, Clo. 20, Foods 1 or 3.

Practice in demonstrations.

Foods 104. Advanced Foods (2)—Second semester. Two laboratory periods a week. Prerequisite, Foods 1 or 3.

Advanced study of manipulation of food materials.

Foods 105. Foods of Other Countries (3)—Second semester. One lecture and two laboratory periods a week. Prerequisite, Foods 1 or 3 or equivalent.

Food preparation and food customs of the peoples of other countries.

Nut. 110. Nutrition (3)—First semester. Prerequisite, Organic Chemistry.

A scientific study of principles of human nutrition.

Nut. 111. Child Nutrition (2)—Second semester. One lecture and one laboratory period a week. Prerequisite, Nut. 110.

Principles of human nutrition applied to growth and development of children. Experience in a nursery school.

Nut. 112. Dietetics (3)—Second semester. One lecture and two laboratory periods a week. Prerequisite, Nut. 110.

A study of food selection for health; planning and calculating dietaries for children and adults; and methods of teaching food values.

Nut. 113. Diet and Disease (2)—First semester. Prerequisite, Nut. 110.

Modifications of the Principles of human nutrition to meet the dietary needs in treating certain diseases.

For Graduates

Foods 200. Advanced Experimental Foods (3-5)—Second semester. Two lectures, three laboratories.

Includes experimental problems, special emphasis on use of Maryland products.

Nut. 210. Readings in Nutrition (3)—First semester.

Reports and discussion of outstanding nutritional research and investigation.

Nut. 211. **Problems in Nutrition** (3-5)—Second semester.

Experience in a phase of nutrition research which is of interest to the student by the use of experimental animals, human studies, or an extensive and critical survey of the literature.

Nut. 212. **Nutrition for Community Service** (3)—Second semester.

Applications of the principles of nutrition to various community problems. Students may work on problems of their own choosing.

Foods and Nut. 220. **Seminar** (1, 1)—One hour a week, first and second semesters.

Foods and Nut. 221. **Research**—Two lectures and 1 laboratory period a week. First and second semesters.

Investigation in some phase of foods or nutrition which may form the basis of a thesis.

HORTICULTURE

Hort. 1. **General Horticulture** (3)—Second semester. Two lectures and one laboratory period a week. Prerequisite, Bot. 1.

A general basic course planned to give the student a background of methods and practices used in production of horticultural crops.

Hort. 5, 6. **Fruit Production** (3, 2)—First and second semesters. One or two lectures and one laboratory period a week. Prerequisite, Hort. 1.

A study of commercial varieties and the harvesting, grading, and storage of fruits. Principles and practices in fruit tree production.

Hort. 10, 11. **Greenhouse Management** (3, 3)—First and second semesters. Two lectures and one laboratory period a week. Prerequisite, Bot. 1.

A detailed study of greenhouse construction and management.

Hort. 16. **Garden Flowers** (3)—Second semester. Two lectures and one laboratory period a week.

The various species of annuals, herbaceous perennials, bulbs, bedding plants, and roses and their cultural requirements.

Hort. 22. **Landscape Gardening** (2)—First semester.

The theory and general principles of landscape gardening and their application to private and public areas.

For Advanced Undergraduates

Hort. 50, 51. **Commercial Floriculture** (3, 3)—First and second semesters. Two lectures and one laboratory period a week. Prerequisites, Bot. 1, Hort. 10, 11.

Growing and handling bench crops and potted plants, and the marketing of cut flowers.

Hort. 52. Landscape Design (3)—First semester. One lecture and two laboratory periods a week. Prerequisites, Hort. 22, Eng. Dr. 1, 2.

A consideration of the principles of landscape design supplemented by direct application in the drafting room.

Hort. 53. Landscape Design (3)—Second semester. Three laboratory periods a week. Prerequisite, Hort. 52.

Advanced landscape design.

Hort. 54. Civic Art (2)—Second semester.

Principles of city planning and their application to village and rural improvements.

Hort. 55. Commercial Processing (4)—First semester. Three lectures and one laboratory period a week. Prerequisite, Chem. 1.

The fundamentals of canning, freezing, and dehydration of horticultural crops.

Hort. 56. Landscape Ornamentals and Floriculture (3)—Second semester. Two lectures and one laboratory period a week.

A course dealing with the basic principles in the use of trees, shrubs, broad-leaved evergreens, annual and perennial flowering plants in ornamental plantings. Designed for any students wishing a broad coverage in this field.

Hort. 58. Vegetable Production (4)—Second semester. Three lectures and one laboratory period a week. Prerequisites, Chem. 1, Bot. 1, and Soils 1.

A study of the principles and practices of commercial vegetable production.

Hort. 59. Small Fruits (3)—Second semester. Two lectures and one laboratory period a week. Prerequisite, Bot. 1.

A study of the principles and practices involved in the production of small fruits including grapes, strawberries, raspberries, blueberries, blackberries, and cranberries.

For Advanced Undergraduates and Graduates

Hort. 101, 102. Technology of Fruits (2, 2)—First and second semesters. Prerequisite, Bot. 101.

For a description of these courses see the general statement under Hort. 101, 102.

Hort. 105. Technology of Ornamentals (2)—First or second semester. Prerequisites, Bot. 101 and Hort. 107.

A study of the physiological plant processes as related to the growth, flowering, and storage of floricultural and ornamental plants.

Hort. 106. World Fruits and Nuts (2)—Second semester. Prerequisite, Bot. 1.

A study of the tropical and subtropical fruits and nuts of economic importance.

Hort. 107, 108. Plant Materials (2, 3)—First and second semesters. Prerequisite, Bot. 1.

A field and laboratory study of trees, shrubs, and vines used in ornamental plantings.

Hort. 112. Canning Crops Technology (3)—First semester. Two lectures and one laboratory period a week. Prerequisites, Hort. 55, Bot. 101.

A course dealing with the technical physico-chemical methods used in the study of the fundamentals or factors influencing the quality of the raw and processed products; physiological processes prior to and after blanching; and grade of processed product.

A critical analysis of research work in horticulture and application of plant physiology, chemistry, and botany to practical problems in commercial production of fruit crops.

Hort. 103, 104. Technology of Vegetables (2, 2)—First and second

Hort. 114. Systematic Pomology (3)—First semester. Two lectures and one laboratory period a week. Prerequisite, Hort. 5, 6.

A study of the origin, history, taxonomic relationships, and description of fruits.

Hort. 116. Systematic Olericulture (3)—First semester. Two lectures and one laboratory period a week. Prerequisite, Hort. 58.

A study of the classification and nomenclature of vegetable crops.

Hort. 118, 119. Seminar (1, 1)—First and second semesters.

Oral presentation of the results of investigational work by reviewing recent scientific literature in the various phases of horticulture.

Hort. 122. Special Problems (2, 2)—First and second semesters. Credit arranged according to work done. For major students in horticulture or botany.

For Graduates

Hort. 201, 202. Experimental Pomology (3, 3)—First and second semesters. Prerequisite, Bot. 101.

A systematic review of scientific knowledge and practical observations as applied to commercial practices in pomology.

Hort. 203, 204. Experimental Olericulture (2, 2)—First and second semesters. Prerequisite, Bot. 101.

A systematic review of scientific knowledge and practical observations as applied to commercial practices in olericulture.

Hort. 205. Experimental Pomology (3)—Second semester.

This course is a continuation of Hort. 201, 202.

Hort. 206. Horticultural Cyto-genetics (3)—Second semester. Prerequisites, Zool. 104, Bot. 101, Bot. 201, or equivalents.

A course dealing with the field of cyto-genetics in relation to horticulture.

Hort. 207. Methods of Horticultural Research (3)—First semester. One lecture and one laboratory period a week.

A critical study of research methods which are or may be used in horticulture.

Hort. 208. Advanced Horticultural Research (2 to 12)—First and second semesters. Credit granted according to work done.

Hort. 209. Advanced Seminar (1, 1)—First and second semesters. Five credit hours for five semesters can be obtained.

Oral reports with illustrative material are required on special topics or recent research publications in horticulture.

INDUSTRIAL EDUCATION, see page 259.

ITALIAN, see page 288.

LIBRARY SCIENCE

L. S. 1, 2. Library Methods (1, 1)—First and second semesters.

This course is intended to help students to use libraries with greater facility and effectiveness. Instruction, given in the form of lectures and practical work, is designed to interpret the library and its resources to the students. The course considers the classification of books in libraries, the card catalog, periodical literature and indexes, and certain essential reference books which will be found helpful throughout the college course and in later years.

L. S. 101. School Library Administration (2)—First semester.

The organization and maintenance of effective library service in the modern school. Planning and equipping library quarters, purpose of the library in the school, standards, instruction in the use of books and libraries, training student assistants, acquisition of materials, repair of books, publicity, exhibits and other practical problems.

L. S. 102. Cataloging and Classification (2)—Second semester. One lecture; one two-hour laboratory.

Study and practice in classifying books and making dictionary catalog for school libraries. Simplified forms as used in the Children's Catalog, Standard Catalog for High School Libraries, and Wilson printed cards are studied.

MATHEMATICS

The following courses are open to students who offer one unit of algebra for entrance: Math. 1, 5, or 10.

The following courses are open to students who offer two or more units of algebra for entrance: Math. 14, 15.

Qualifying examinations are given in Math. 10 and 15 shortly after registration to determine if the preparation of the student is adequate for the course in which he is enrolled. In case the student is inadequately prepared the department endeavors to place him in a course in line with his mastery of mathematics.

In general students should enroll in only one course in the groups below. In case this rule is not followed credit will be assigned as indicated.

Math. 5, 10, 15. Credit for only one course.
Math. 11, 14. Math. 11—1½ credits; Math. 14—2 credits.
Math. 11, 17. Math. 11—1½ credits; Math. 17—4 credits.

The department strongly recommends that a student who receives a grade of D in a course in mathematics consult a member of the mathematics staff before going to a more advanced course. During registration a senior member of the staff is available for consultation in the mathematics office in E-226.

Math. 0. Basic Mathematics (0)—First and second semester. Recommended to students who fail the qualifying examination in Math. 10.

The fundamental principles of algebra.

Math. 1. Introductory Algebra (0)—First and second semesters. Prerequisite, one unit of algebra. Open to students of engineering and required of students who fail in the qualifying examination in Math. 15.

A review of the topics covered in a second course in algebra.

Math. 2. Solid Geometry (0)—First and second semesters. Prerequisite, plane geometry. Open to students who enter deficient in solid geometry.

Lines, planes, cylinders, cones, the sphere and polyhedra, primary emphasis on mensuration. Intended for engineers and science students.

Math. 5. General Mathematics (3)—First and second semesters. Prerequisite, one unit of algebra. Open only to students in the College of Business and Public Administration, and the College of Agriculture.

Fundamental operations, ratio and proportion, percentage, simple interest, linear and quadratic equations, exponents and radicals, logarithms, the slide rule, functions and graphs, progressions, binomial theorem.

Math. 6. Mathematics of Finance (3)—First and second semesters. Prerequisite, Math. 5, or equivalent. Open to students in the College of Business and Public Administration.

Simple and compound interest, discount, amortization, sinking funds, valuation of bonds, depreciation, annuities, and insurance.

Math. 7. Solid Geometry (3)—First semester. Prerequisite, plane geometry. Open to students in the College of Education.

Emphasis will be placed on the logical development of the subject. Intended for students who expect to teach mathematics.

Math. 10. Algebra (3)—First and second semesters. Prerequisite, one unit of algebra. Open to biological, premedical, predental, and general Arts and Science students.

Fundamental operations, factoring, fractions, linear equations, exponents and radicals, logarithms, quadratic equations, variation, binomial theorem, theory of equations.

Math. 11. Trigonometry and Analytic Geometry (3)—First and second semesters. Prerequisite, Math. 10 or equivalent. Open to biological, premedical, predental, and general Arts and Science students. This course is not recommended for students planning to enroll in Math. 20.

Trigonometric functions, identities, addition formulas, solution of triangles, coordinates, locus problems, the straight line and circle, conic sections, graphs.

Math. 13. Elements of Mathematical Statistics (3)—Second semester. Prerequisite, one of Math. 5, 10, 15.

Frequency distributions, averages, moments, measures of dispersion, the normal curve, curve fitting, regression and correlation.

Math. 14. Plane Trigonometry (2)—First and second semesters. Prerequisite, Math. 15 or concurrent enrollment in Math. 15. Open to students in engineering, education, and the physical sciences.

Trigonometric functions, identities, the radian, graphs, addition formulas, solution of triangles, trigonometric equations.

Math. 15. College Algebra (3)—First and second semesters. Prerequisite, high school algebra completed. Open to students in engineering, education, and the physical sciences.

Fundamental operations, variation, functions and graphs, quadratic equations, theory of equations, binomial theorem, complex numbers, logarithms determinants, progressions.

Math. 16. Spherical Trigonometry (2)—First semester. Prerequisites, solid geometry and plane trigonometry.

The solution of spherical triangles, with applications to the terrestrial and astronomical triangles.

Math. 17. Analytic Geometry (4)—Three lectures and two one-hour laboratory periods a week, first and second semesters. Prerequisite, Math. 14 and 15, or equivalent. Open to students in engineering, education, and the physical sciences.

Coordinates, locus problems, the straight line and circle, graphs, transformation of coordinates, conic sections, parametric equations, transcendental equations, solid analytic geometry.

Math. 18, 19. Pictorial Geometry (2, 2)—First and second semesters. Open to students in the College of Education.

The story of geometry, classical and modern, synthetic and analytic, presented by means of drawings made by the students themselves.

Math. 20, 21. Calculus (4, 4)—Three lectures and two one-hour laboratory periods a week, first and second semesters, second and first semesters. Prerequisite, Math. 17, or equivalent. Open to students in engineering, education and the physical sciences.

Limits, derivatives, differentials, maxima and minima, curve sketching, rates, curvature, kinematics, integration with geometric and physical applications, partial derivatives, space geometry, multiple integrals, infinite series, differential equations.

Math. 64. Differential Equations for Engineers (3)—First and second semesters. Prerequisite, Math. 21 or equivalent. Required of students in mechanical and electrical engineering.

Ordinary and partial differential equations of the first and second order with emphasis on their engineering applications.

Math. 66. Applied Calculus (3)—First semester. Prerequisite, Math. 21 or equivalent.

The fundamental mathematical principles underlying problems of flow, thermodynamics and physical chemistry.

Math. 80, 81. Senior Tutorial (1, 1)—First and second semesters. Required of Seniors majoring in mathematics.

A. Algebra

For Graduates and Advanced Undergraduates

Math. 100, 101. Higher Algebra (3, 3)—First and second semesters. Prerequisite, Math. 20, 21 or equivalent.

Selected topics in algebra will be taken up from a point of view designed to strengthen and deepen the grasp of the subject.

Math. 102 Theory of Equations (3)—(Not offered 1946-47). Prerequisite, Math. 20, 21, or equivalent.

Solution of equations of third and fourth degree, construction of regular polygons, trisection of an angle, symmetric functions.

Math. 103. Introduction to Modern Algebra (3)—(Not offered 1946-47). Prerequisite, Math. 20, 21, or equivalent.

Linear dependence, matrices, groups, vector spaces.

For Graduates

Math. 200, 201. Modern Algebra (3, 3)—First and second semesters. Prerequisite, Math. 103 or consent of instructor.

Matrices, groups, rings, fields, algebraic numbers, Galois theory.

Math. 271. Selected Topics in Algebra (3)—(Arranged).

B. Analysis

For Graduates and Advanced Undergraduates

Math. 110, 111. Advanced Calculus (3, 3)—First and second semesters. Prerequisite, Math. 20, 21, or equivalent.

Limits, continuous functions, differentiation and integration with application to mechanics, infinite series, Fourier series, functions of several variables, differential equations with applications to mechanics and physics, multiple integrals, the theorems of Gauss and Stokes, the calculus of variations.

Math. 114, 115. Differential Equations (3, 3)—Prerequisite, Math. 20, 21, or equivalent.

Ordinary differential equations, symbolic methods, successive approximations, solutions in series, orthogonal functions, Bessel functions, Sturmian theory. Partial differential equations of first and second order, characteristics, boundary value problems, Pfaffians, systems of equations, applications.

Math. 116. Introduction to Complex Variable Theory (3)—(Not offered 1946-47). Prerequisite, Math. 20, 21, or equivalent. Open to students of engineering, and the physical sciences. Graduate students of mathematics should enroll in Math. 210, 211.

Fundamental operations in complex numbers, differentiation and integration, analytic functions, conformal mapping, residue to theory, power series.

For Graduates

Math. 210, 211. Functions of a Complex Variable (3, 3)—(Not offered 1946-47). Prerequisite, advanced calculus.

Complex numbers, infinite series, Cauchy-Riemann equations, conformal mapping, complex integral, the Cauchy theory, the Weierstrass theory, Riemann surfaces, algebraic functions, periodic and elliptic functions, the theorems of Weierstrass and Mittag-Leffler.

Math. 213, 214. Functions of a Real Variable (3, 3)—First and second semesters. Prerequisite, advanced calculus.

The real number system, point sets, the Heine-Borel theorem, continuous functions, derivatives, infinite series, uniform convergence, the Riemann integral, Jordan content, the Lebesque integral, Fourier series.

Math. 215, 216. Analysis (3, 3)—(Not offered 1946-47). Prerequisite, advanced calculus and a course in complex variable theory.

Theory of residues, infinite series, asymptotic expansions, trigonometrical series, differential and integral equations, transcendental functions.

Math. 272. Selected Topics in Analysis (3)—(Arranged).

C. Geometry.

For Graduates and Advanced Undergraduates

Math. 120. Advanced Analytic Geometry (3)—Second semester. Prerequisite, Math 20, 21, or equivalent.

Linear and quadratic forms, conic sections and quadric surfaces.

Math. 124, 125. Introduction to Projective Geometry (3, 3)—First and second semesters. Prerequisite, Math. 20, 21, or equivalent.

Elementary projective geometry largely from the analytic approach, projective transformations, cross ratio, harmonic division, projective coordinates, projective theory of conics, Laguerre's definition of angle.

Math. 126. Introduction to Differential Geometry (3)—(Not offered 1946-47). Prerequisite, Math. 20, 21, or equivalent.

The differential geometry of curves and surfaces with the use of vector and tensor methods, curvature and torsion, moving frames, curvilinear coordinates, the fundamental differential forms, covariant derivatives, intrinsic geometry, curves on a surface, dynamical applications.

Math. 128, 129. Higher Geometry (3, 3)—(Not offered 1946-47). Prerequisite, two years of college mathematics. Open to students in the College of Education.

This course is designed for students preparing to teach geometry in high school. The first semester is devoted to the modern geometry of the triangle, circle and sphere. In the second semester emphasis is placed on the axiomatic development of Euclidean and Non-Euclidean geometry.

For Graduates

Math. 220, 221. Differential Geometry (3, 3)—(Not offered 1946-47). Prerequisite, Math. 126 or equivalent.

Curves and surfaces, geometry in the large, the Gauss-Bonnet formula, ovaloids, surfaces of constant curvature, projective differential geometry.

Math. 223, 224. Topology (3, 3)—First and second semesters. Prerequisite, advanced calculus.

Mathematics based on a system of axioms, abstract spaces, connectivity and separation properties, topological properties of Euclidean spaces, set theoretic and combinatorial methods, continuous transformations.

Math. 273. Selected Topics in Geometry and Topology (3)—(Arranged).

D. Applied Mathematics

For Graduates and Advanced Undergraduates

Math. 130, 131. Analytic Mechanics (3, 3)—(Not offered 1946-47). Prerequisite, Math. 20, 21, or equivalent.

Statics, kinematics, dynamics of a particle, elementary celestial mechanics, Lagrangian equations for dynamical systems of one, two, and three degrees of freedom, Hamilton's principle, the Hamilton-Jacobi partial differential equation.

Math. 132, 133. Advanced Mathematics for Engineers and Physicists (3, 3)—Prerequisite, Math. 64, or equivalent.

Designed to introduce the student to advanced mathematical methods and their applications to problems arising in the fields of aeronautical, electrical and mechanical engineering, and in the physical sciences.

Math. 134. Vector Analysis (3)—Second semester. Prerequisite, Math. 20, 21, or equivalent.

Vector algebra with applications to geometry and mechanics.

Math. 139. Operational Calculus (3)—First semester. Prerequisite, Math. 64, or equivalent. Intended for students of engineering and physics.

Operational solutions of ordinary and partial differential equations. Fourier and Laplace transforms.

For Graduates

Math. 230, 231. Applied Mathematics (3, 3)—First and second semesters. Prerequisite, advanced calculus and differential equations.

The subject material for this course will be chosen from the fields of dynamics, elestacity, hydro-dynamics, or the partial differential equations of mathematical physics.

Math. 233, 234. Tensor Analysis (3, 3)—First and second semesters. Prerequisite, advanced calculus and differential equations.

Algebra and calculus of tensors, Riemann geometry and its extensions, differential invariants, transformation groups, applications to physics and engineering, the theory of relativity.

Math. 273. Selected Topics in Applied Mathematics (3)—(Arranged).

E. History of Mathematics

For Graduates and Advanced Undergraduates

Math. 140, 141. Celebrated Problems of Mathematics (2, 2)—First and second semesters. Prerequisite, two years of college mathematics. Open to students in the College of Education and to qualified students.

This course aims at integrating the mathematical knowledge acquired by the student in high school and college through the study of some of the famous historical problems in the fields of arithmetic, algebra, geometry, and the calculus.

For Graduates

Math. 240, 241. Seminar in the History of Mathematics (2, 2)—(Arranged). Open to first year graduate students.

This seminar aims at a triple objective: first, an integrating review of the undergraduate mathematics; second, development in the student of a proper historical perspective and a critical attitude toward fundamental concepts; third, an interpretation of the mathematical masters of the past.

F. Statistics

For Graduates and Advanced Undergraduates

Math. 150, 151. Probability (3, 3)—(Not offered 1946-47). Prerequisite, differential and integral calculus.

Combinatory analysis, total, compound and inverse probability, continuous distributions, theorems of Bernoulli and Leplace, applications to statistics and the theory of errors.

Math. 152, 153. Mathematical Statistics (3, 3)—(Not offered 1946-47). Prerequisite, differential and integral calculus.

Frequency distributions and their parameters, multivariate analysis and correlation, theory of sampling, analysis of variance, statistical inference

G. Colloquium and Research

For Graduates

Math. 290. Colloquium—First and second semesters.

Math. 300. Research—(Arranged).

MECHANICS

Mech. 1. Statics and Dynamics (3)—Second semester. Prerequisite, to be taken concurrently with Math. 21 and Phys. 21.

Solutions of force systems; graphic statics; friction, centroids and moments of inertia; kinematics and kinetics; work, power, energy, impulse and momentum.

Mech. 2. Statics and Dynamics (5)—First semester. Four lectures and one laboratory period a week. Prerequisite, Dr. 3 and to be taken concurrently with Math. 21 and Phys. 21.

A more intensive treatment of the subject matter than Mech. 1.

For Advanced Undergraduates

Mech. 50. Strength of Materials (4)—First and second semesters. Prerequisite, Mech. 1 or 2, or equivalent. Required of juniors in civil engineering.

Thin-walled cylinders; riveted and welded joints, torsion; stresses in beams; design of columns; use of structural steel handbook. Beam deflections; statically indeterminate beams; combined loadings; composite beams; impact and energy loadings.

Mech. 51. Strength of Materials (3)—First semester. Prerequisite, Mech. 1 or 2, or equivalent. Required of juniors in electrical engineering.

A shorter course than Mech. 50.

Mech. 52. Strength of Materials (5)—First semester. Prerequisite, Mech. 1 or 2, or equivalent. Required of juniors in aeronautical and mechanical engineering.

A more intensive course than Mech. 50.

Mech. 53. Materials of Engineering (2)—First and second semesters. One lecture and one laboratory period a week. Prerequisite, Mech. 50 or 51.

The composition, manufacture, and properties of the principal materials used in engineering; performance of standard tests; interpretation of test results and of specifications.

MECHANICAL ENGINEERING

For Advanced Undergraduates

M. E. 50. Principles of Mechanical Engineering (3)—First semester. Two lectures and one laboratory period a week. Prerequisites, Phys. 20, 21 and Math. 21. Required of juniors in Civil Engineering.

Elementary thermodynamics and the study of heat, fuel and combustion in the production and use of steam for generation of power. Supplemented by laboratory tests and trips to industrial plants.

M. E. 51. Thermodynamics (4)—First semester. Three lectures and one laboratory period a week. Prerequisites, Math. 21, Phys. 21. Required of seniors in Electrical Engineering.

The theory and application of thermodynamics to the steam engine, steam turbine, etc.

M. E. 52. Power Plants (4)—Second semester. Three lectures and one laboratory period a week. Required of seniors in Electrical Engineering.

The theory and operation of steam engines, boilers, condensers, steam turbines, and their accessories.

M. E. 53. Metallography (3)—First and second semesters. Two lectures and one laboratory period a week.

A study of the structure, properties, heat treatment, and manufacture of metals and alloys. Laboratory work in the inspection, testing and examination of metallic structures.

M. E. 54. Fluid Mechanics (3)—Second semester. Two lectures and one laboratory period a week.

A study of all fluids under all possible conditions of rest and motion. Its approach is analytical, rational, and mathematical rather than empirical. Applications to turbine and centrifugal pump design and flow of gases.

M. E. 55. Fluid Mechanics and Aerodynamics (3)—Second semester. Three lectures a week. Prerequisites, Math. 21 and Phys. 21. Required of juniors in Mechanical Engineering, Aeronautical Option.

A study of the fundamental principles of the flow of air and of water. Applications with special reference to the airplane; airfoil and propeller theory; theory of model testing in wind tunnels; design performance, calculation of airplanes.

For Advanced Undergraduates and Graduates

M. E. 100. Thermodynamics (3)—Second semester. Two lectures and one laboratory period a week. Required of juniors in Aeronautical and Mechanical Engineering.

The properties and fundamental equations of gases and vapors.

M. E. 101. Heat Transfer (2)—First semester. Two lectures a week.

Basic principles of heat transfer including a study of conduction, convection, radiation, evaporation and condensation. Prerequisites, M. E. 54 and M. E. 100.

M. E. 102. Heating and Ventilation (3)—First semester. Two lectures and one laboratory period a week. Prerequisites, M. E. 100, 101. Required of seniors in Mechanical Engineering.

Design of heating and ventilation systems.

M. E. 103. Refrigeration (3)—Second semester. Two lectures and one laboratory period a week. Prerequisites, M. E. 100, 101. Required of seniors in Mechanical Engineering.

Problems involving the different methods and processes of refrigeration. Air conditioning for offices, buildings, factories, and homes.

M. E. 104, 105. Prime Movers (4, 4)—First and second semesters. Two lectures and two laboratory periods a week. Prerequisites, Mech. 50; M. E. 100, 101. Required of seniors in Mechanical Engineering.

Design and use of prime movers to convert heat energy into power.

M. E. 106, 107. Mechanical Engineering Design (4, 4)—First and second semesters. Two lectures and two laboratory periods a week. Prerequisites, Mech. 50; M. E. 100, 101.

The design of machine members and mechanisms.

M. E. 108, 109. Mechanical Laboratory (2, 2)—First and second semesters. One lecture and one laboratory period a week. Prerequisite, senior standing. Required of seniors in Mechanical Engineering.

Experiments on engines and other machines are performed in the laboratory. Reports are required on tests.

For Graduates

M. E. 200, 201. Advanced Dynamics (3, 3)—First and second semesters. Prerequisites, Mech. 2, Mech. 50, Math. 64, M. E. 106, 107; M. E. 108, 109.

Mechanics of machinery. Dynamic forces. Balancing of rotating parts. Vibrations and vibration damping. Critical speeds.

M. E. 202, 203. Applied Elasticity (3, 3)—First and second semesters. Prerequisites, Mech. 2, Mech. 50; Math. 64; M. E. 108, 109.

Advanced methods in structural analysis of machines. Problem involving instability of structures. Photo elasticity. Methods of experimental stress analysis. Advanced strength of materials.

M. E. 204, 205. Advanced Thermodynamics and Heat Transfer (3, 3)—First and second semesters. Prerequisites, M. E. 100, 101; M. E. 106, 107; Math. 64.

Advanced problems in internal combustion engine design. Problems in combustion. Advanced theory of heat transmission by conduction, radiation, and convection.

M. E. 206, 207. Advanced Machine Design (3, 3)—First and second semesters. One lecture and two laboratory periods a week. Prerequisites, M. E. 108, 109.

Design of entire machines. Application of advanced methods of stress analysis to design of stationary and moving parts.

M. E. 208, 209. Steam Power Plant Design (3, 3)—First and second semesters. One lecture and two laboratory periods a week. Prerequisites, M. E. 106, 107.

The design and specifications of steam power plants for specific purposes. Each student will carry out complete design including detail drawings.

M. E. 210, 211. Advanced Fluid Mechanics (3, 3)—First and second semesters. Prerequisites, M. E. 54, Math. 64.

Advanced theory of the flow of fluids and gases. Hydrodynamic theory. Engineering applications.

M. E. 212, 213. Advanced Steam Power Laboratory (2, 2)—First and second semesters. One lecture and one laboratory period a week. Prerequisite, registration in M. E. 204, 205.

Research on advanced steam power problems to illustrate and advance steam power theory. Power plant heat balances.

M. E. 214, 215. Advanced Applied Mechanics Laboratory (2, 2)—First and second semesters. One lecture and one laboratory period a week. Prerequisites, registration in M. E. 200, 201 and M. E. 202, 203.

Illustrative experiments and research on difficult problems in stress analysis. Photoelasticity. Mechanical vibrations. Critical speeds. Dynamic stresses. Fatigue of materials.

M. E. 216, 217. Advanced Internal Combustion Engine Design (3, 3)—First and second semesters. One lecture and two laboratory periods a week. Prerequisites, M. E. 106, 107; M. E. 108, 109; and registration in M. E. 200, 201 and M. E. 204, 205.

Each student will carry out complete designs of internal combustion engines.

M. E. 218, 219. Advanced Internal Combustion Engine Laboratory (2, 2)—First and second semesters. One lecture and one laboratory period a week. Prerequisite, registration in M. E. 216, 217.

Advanced laboratóry tests and problems in the design of internal combustion engines.

M. E. 220. Seminar—Credit in accordance with work outlined by mechanical engineering staff. Prerequisite, graduate standing in mechanical engineering.

M. E. 221. Research—Credit in accordance with work outlined by mechanical engineering staff. Prerequisite, graduate standing in mechanical engineering.

Research in any field of mechanical engineering as applied mechanics, heat transfer, thermodynamics, heat, power, etc.

M. E. 222. Advanced Metallography (3)—First or second semester. Two lectures and one laboratory period a week.

Advanced study of the structure and properties of metals and alloys including a study of the X-ray, spectographic, and metallographic methods of inspection of metals. Review of the current literature.

M. E. 223, 224. Steam and Gas Turbine Design (3, 3)—First and second semesters. Prerequisites, M. E. 100, M. E. 101, M. E. 106-107, and Math. 64.

Study of nozzles and blades, with application to all types of turbines and compressors. Design of steam and gas turbines and compressors based on detailed heat calculations.

Mechanical Engineering Shop

Shop 1. Machine Shop Practice (2)—First semester. Two laboratory periods a week. Required of sophomores in Aeronautical and Mechanical Engineering.

Study and practice of fundamental principles of machine tools.

Shop 2. Foundry Practice (1)—Second semester. One combination lecture and laboratory period a week. Required of sophomores in Mechanical Engineering.

Lectures and recitations on foundry products and layouts, materials and equipment, molding, casting, etc.

Shop 3. Machine Shop Practice (1)—Second semester. One laboratory period a week. Prerequisite, Shop 1.

Advanced practice with standard machine tools. Exercises in thread cutting, fluting, cutting spur and helical gears, jig work, and cutter and surface grinding.

MILITARY SCIENCE AND TACTICS

M. I. I-1, 2. Basic R. O. T. C. (3)—Every semester.

Two one hour periods of Infantry Drill and three one hour classroom periods. Subjects: Equipment and Clothing, Military Courtesy, Dismounted Drill, Extended Order, First Aid, Sex Hygiene, Interior Guard, M1 Rifle, Mechnical Training, Rifle Marksmanship, Marches and Bivouacs, Formations, Ceremonies, and Processing, Map Reading, Elevation and Relief, Practical Field Work in Map Reading, Protection Against Carelessness, Cover and Movement, Concealment and Camouflage, Scouts, Patrols, Browning Automatic Rifle.

M. I. II-1, 2. Basic R. O. T. C. (3)—Every semester.

Two one hour periods of Infantry Drill and three one hour classroom periods. Subjects: Associated Arms, Map Reading, Safeguarding Military Information, Training Management, Articles of War, Application of Military Law, Personal and Sex Hygiene, Administration, Training Tests, Pistol and Carbine, Machine Gun, Tactical Training, Marches and Bivouacs, Formations, Ceremonies, and Processing, Review of Weapons, First Aid, Field Sanitation, Chemical Warfare, Aerial Photography.

Adv. I. First Year Advanced Course (3)—Each semester.

Two one hour periods of Infantry Drill and three one hour classroom periods. Subjects: Army Vehicles and Aircraft, Basic Infantry Tactics, Classification Procedures and Utilization of Manpower, Combined Arms, Communications, Current Organization of the Army, Drill, Ceremonies, and Inspections, Principles of Leadership, Health of Personnel, Individual Tactics, Interior Guard Duty, Map and Aerial Photo Reading, Mess Management, Military Courtesy, Discipline, and Customs of the Army, Military Instruction, Military Law and Boards of Officers, Principles of Intelligence, Reconnaissance and Security, R. O. T. C. and National Defense, Supply Management, Unit Administration, Weapons.

Senior year curriculum, Military Science and Tactics, not available for 1946-47.

PHYSICAL ACTIVITIES

P. E. 1-4. Physical Activities (1)—Each semester. Required of all men students in freshman and sophomore years.

A course designed to promote individual physical development and to raise and maintain a physical fitness level.

Remedial activities for those designed by the Student Health Service to be arranged.

MODERN LANGUAGES, see **FOREIGN LANGUAGES**, page 279.

MUSIC

Music 1. Music Appreciation (3)—First semester.

A study of all types of classical music (not including opera) from the time of Haydn, with a view to developing the ability to listen and enjoy.

Music 2, 3. History of Music (1, 1)—First and second semesters.

A course in the history of music covering the development of all forms of music (not including opera) from the Greeks to the present.

Music 4. Men's Glee Club (1)—First and second semesters.

A total of six credits may be earned.

Music 5. Women's Chorus (1)—First and second semesters.

A total of six credits may be earned.

Music 6. Orchestra (1)—First and second semesters.

Music 7, 8. Harmony (2, 2)—First and second semesters.

This course includes a study of major and minor scales, intervals, harmonic progressions, triades in root position and inversions and continuing through altered and mixed chords to modulation.

Music 9. Survey of Opera (3)—Second semester.

The object of this course is to acquaint the student with the librettos, music and the composers of the standard operas.

Music 10. Band (1)—First and second semesters.

A total of six credits may be earned.

NUTRITION, see page 303.

PHILOSOPHY

Phil. 1. Fundamentals of Philosophy (3).

Problems pertaining to the study of man, presented with a constant regard for the needs of prospective students of medicine.

Phil. 2. Ethics (3)—Open to freshmen only by special permission.

An introductory course in philosophy, stressing its function in daily life, in education, in society, and in statecraft.

Phil. 11, 12. The Occidental Tradition (6)—Open to sophomores and upperclassmen who attained a 2.5 average in the previous semester. Open to others only by special permission of their Dean and of the Department of Philosophy. By special permission, a student who has had one course in philosophy may register and get credit for either of the two semesters separately.

An introductory survey of the history of ideas in the Occident. First semester: Ancient and medieval thought. Second semester: Modern thought. The purpose of the course is to give students the conceptual means by which to integrate their collegiate growth, and to train them in the method of such integration.

For Advanced Undergraduates

Phil. 51. Metaphysics (3)—Prerequisite, one course in philosophy. May be taken simultaneously with the second semester of Phil. 11, 12.

A course in philosophical thinking, designed for students desiring a clearer conception of basic reality, and for the needs of prospective teachers and theologians.

For Advanced Undergraduates and Graduates

Phil. 181, 182, 183, 184. Proseminar in Philosophy (3)—Two-hour seminar session, one hour tutorial. Or three lectures. Open to undergraduates only by special permission of the Department of Philosophy, and to graduates only after consultation with the Head of the Department of Philosophy.

The philosophical proseminar is designed for specially qualified undergraduates who have had the necessary preliminary work, and for graduate students desiring the help of philosophy in the study of their respective fields. The content of the course will be chosen so as to serve the needs of the group of students enrolled.

Phil. 191, 192. Readings in Philosophy (2, 2)—Individual library work and tutorials. Prerequisite, three courses in philosophy, and the permission of the Department of Philosophy.

Individual work for especially qualified advanced students under supervision and with tutorial advice. Regular written reports and essays.

PHYSICAL EDUCATION FOR MEN, see page 267.

PHYSICAL EDUCATION FOR WOMEN, see page 267.

PHYSICS

Phys. 1. Elements of Physics: Mechanics, Heat, and Sound (3)—First semester. Two lectures, and one recitation a week. The first half of a survey course in general physics. *This course is for the general student and does not satisfy the requirements of the professional schools.* Prerequisite, successful passing of the qualifying examination in elementary mathematics. Lecture demonstration fee $3.00.

Phys. 2. Elements of Physics: Magnetism, Electricity, and Optics (3)—Second semester. Two lectures and one recitation a week. The second half of a survey course in general physics. *This course is for the general student and does not satisfy the requirements of the professional schools.* Prerequisite, Phys. 1. Lecture demonstration fee $3.00.

Phys. 10. Fundamentals of Physics: Mechanics and Heat (4)—First semester. Two lectures, one recitation, and one three hour laboratory period a week. The first half of a course in general physics. *This course together with Phys. 11, satisfies the minimum requirements of medical and dental schools.* Prerequisite, entrance credit in trigonometry or Math. 11 or concurrent enrollment in Math. 14 and 15. Laboratory fee, $5.00.

Phys. 11. Fundamentals of Physics: Sound, Optics, Magnetism, and Electricity (4)—Second semester. Two lectures, one recitation, and one three hour laboratory period a week. The second half of a course in general physics. Prerequisites, Phys. 10, or 20. Laboratory fee $5.00.

Phys. 20. General Physics: Mechanics and Heat (5)—First semester. Two lectures, two recitations and one three hour laboratory period a week. The first half of a course in general physics. *Required of all students in the engineering curricula.* Math. 20 is to be taken concurrently. Laboratory fee $5.00.

Phys. 21. General Physics: Sound, Optics, Magnetism, and Electricity (5)—Second semester. Two lectures, two recitations, and one three hour laboratory period a week. The second half of a course in general physics. *Required of all students in the engineering curricula.* Prerequisite, Phys. 20. Math. 21 is to be taken concurrently. Laboratory fee $5.00.

Phys. 50, 51. Applied Mechanics (3, 3)—First and second semesters. Three lectures a week. Prerequisite, Phys. 11, or Phys. 21.

Phys. 52. Heat (5)—First semester. Three lectures and two three hour laboratory periods a week. Prerequisite, Phys. 11 or 21. Math. 20 is to be taken concurrently. Laboratory fee $10.00.

Phys. 54. Sound (5)—Second semester. Three lectures and two three hour laboratory periods a week. Prerequisite, Phys. 11 or 21. Math. 21 is to be taken concurrently. Laboratory fee $10.00.

For Advanced Undergraduates and Graduates

Phys. 100. Advanced Experiments (3)—First and second semesters. One lecture and two three hour laboratory periods a week. Prerequisites, Phys. 11 or 21 and Math. 21. Laboratory fee $10.00 (Not offered 1945-46.)

Phys. 102. Optics (5)—First semester. Three lectures and two three hour laboratory periods a week. Prerequisites, Phys. 11 or 21 and Math. 21. Laboratory fee $10.00.

Phys. 104, 105. Electricity and Magnetism (5, 5)—Second and first semesters. Three lectures and two three hour laboratory periods a week. Prerequisites, Phys. 11 or 21 and Math. 21. Laboratory fee $10.00.

Phys. 106, 107. Theoretical Mechanics (3, 3)—First and second semesters. Two lectures a week. Prerequisites, Phys. 11 or 21 and Math. 21.

Phys. 108, 109. Electron Physics (3, 3)—First and second semesters. Two lectures and one three hour laboratory period a week. Prerequisite, Phys. 104. Laboratory fee $5.00 (Not offered 1945-46.)

Phys. 110, 111. High Frequency Phenomena (3, 3)—First and second semesters. Two lectures and one three-hour laboratory period a week. Prerequisite, Phys. 105. Laboratory fee $5.00. (Not offered 1945-46.)

Phys. 112. Modern Physics (4)—Second semester. Three lectures, one three hour laboratory period a week. Prerequisites, Phys. 102 and 104. Laboratory fee $5.00.

Phys. 114, 115. Introduction to Theoretical Physics primarily for students planning to do graduate work (5, 5)—Five lectures a week, first and second semesters. Prerequisite, advanced standing in physics and mathematics. Myers.

For Graduates

Phys. 202, 203. Advanced Dynamics (2, 2)—Two lectures a week. Prerequisite, Phys. 114. (Not offered in 1946-47.) Myers.

Phys. 204. Electrodynamics (4)—Four lectures a week, second semester. Prerequisite, Phys. 115. (Not offered in 1946-47.) Myers.

Phys. 206. Physical Optics (3)—Prerequisite, Phys. 115. Myers.

Phys. 208, 209. Thermodynamics (2, 2)—Prerequisite, Phys 115 or equivalent. (Not offered in 1946-47.) Brickwedde.

Phys. 210, 211. Statistical Mechanics and the Kinetic Theory of Gases (2, 2)—Two lectures a week. Prerequisite, Phys. 112 and 115. (Not offered in 1946-47.) Kennard.

Phys. 212, 213. Introduction to Quantum Mechanics (2, 2)—Two lectures a week, first and second semesters. Prerequisite, Phys. 115. Brickwedde.

Phys. 214, 215. Theory of Atomic Spectra (2, 2)—Two lectures a week. Prerequisite, Phys. 213. (Not offered in 1946-47.) Shortley.

Phys. 216, 217. Molecular Structure (2, 2)—Two lectures a week. Prerequisite, Phys. 213. (Not offered in 1946-47.) Brickwedde.

Phys. 218, 219. X-rays and Crystal Structure (3, 3)—Three lectures a week. Morgan.

Phys. 220. Application of X-ray and Electron Diffraction Methods (2)—Two laboratory periods a week. (Not offered in 1946-47.) Morgan.

Phys. 222, 223. Boundary-Value Problems of Theoretical Physics (2, 2) —Prerequisite, Phys. 115. Shortley.

Phys. 224, 225. Supersonic Aerodynamics and Compressible Flow (2, 2) —Prerequisite, Phys. 115. (Not offered in 1946-47.) Shortley.

Phys. 226, 227. Theoretical Hydrodynamics (2, 2)—Prerequisite, Phys. 115 or elementary hydrodynamics. Kennard.

Phys. 230. Seminar (1)—First and second semesters.

Phys. 232, 233. Hydromechanics Seminar (1, 1)—(Not offered in 1946-1947.) Kennard.

Phys. 250. Research—Credit according to work done.

PLANT PATHOLOGY, see page 226.

PLANT PHYSIOLOGY, see page 226.

POLITICS AND GOVERNMENT

P. & G. 1. American Government (3).

This course is designed as the basic course in government for the American Civilization program. It comprises a comprehensive study of governments in the United States and their adjustment to changing social and economic conditions.

P. & G. 2. American National Government (3).

A study of the organization and functions of the national government of the United States.

P. & G. 4. State and Local Government (3)—Prerequisite, P. & G. 2.

A study of the organization and functions of state and local government in the United States, with special emphasis upon the government of Maryland.

P. & G. 7. Comparative Government (2)—Prerequisite, P. & G. 2.

A comparative study of the governments of Great Britain, France and Switzerland.

P. & G. 8. Comparative Government (2)—Prerequisite, P. & G. 2.

A comparative study of the dictatorial governments of Europe, with special emphasis upon Italy, Germany, and the U. S. S. R.

P. & G. 9. Comparative Government (2)—Prerequisite, P. & G. 2.

A study of Latin American Governments with special emphasis on Argentina, Brazil, and Chile.

P. & G. 10. Comparative Government (2)—Prerequisite, P. & G. 2.

A study of Far Eastern governments with special emphasis on China and Japan.

The course deals with the major factors underlying international relations, the influence of geography, climate, nationalism and imperialism, and the development of international organizations.

P. & G. 64. Municipal Government and Administration (3)—Prerequisite, P. & G. 4.

A detailed study of selected problems of municipal government, such as housing, health, zoning, fire and police, recreation and planning. Course includes a visit to Baltimore to observe the agencies of city government at work.

For Advanced Undergraduates and Graduates

P. & G. 101. International Relations (3)—Prerequisite, P. & G. 2 or consent of instructor.

P. & G. 102. International Law (3)—Prerequisite, P. & G. 2.

A study of the principles governing international intercourse in time of peace and war, as illustrated in texts and cases.

P. & G. 105. Recent Far Eastern Politics (3)—Prerequisite, P. & G. 2, or consent of instructor.

The background and interpretation of recent political events in the Far East and their influence on world politics.

P. & G. 124. Legislatures and Legislation (3)—Prerequisite, P. & G. 2.

A comprehensive study of the legislative process, bicameralism, the committee system and the lobby, with special emphasis upon the legislature of Maryland. The course includes a visit to Washington to observe Congress at work.

P. & G. 131. Constitutional Law (3)—Prerequisite, P. & G. 2.

A systematic inquiry into the general principles of the American constitutional system, with special reference to the role of the judiciary in the interpretation and enforcement of the constitution; the position of the states in the federal system; state and federal powers over interstate and foreign commerce; and the rights of citizens and of accused persons.

P. & G. 141. History of Political Theory (3)—Prerequisite, P. & G. 2 or consent of instructor.

A survey of the principal political theories set forth in the works of writers from Plato to Bentham.

P. & G. 142. Recent Political Theory (3)—Prerequisite, P. & G. 2 or consent of instructor.

A study of recent political ideas, with special emphasis upon theories of socialism, communism, fascism, etc.

P. & G. 144. American Political Theory (3)—Prerequisite, P. & G. 2 or consent of instructor.

A study of the writings of the principal American Political theorists from the colonial period to the present.

P. & G. 154. Problems of World Politics (3)—Prerequisite, P. & G. 2 or consent of instructor.

The course deals with governmental problems of an international character, such as causes of war, problems of neutrality, propaganda, etc. Students are required to report on readings from current literature.

P. & G. 174. Political Parties and Public Opinion (3)—Prerequisite, P. & G. 2.

A descriptive and critical examination of the party process in government; nominations and elections, party expenditures, political leadership; the management and conditioning of public opinion.

For Graduates

P. & G. 201. Seminar in International Organization (4).

A study of the forms and functions of various international organizations.

P. & G. 202. British Empire (3).

A study of the constitutional development of the British Dominions, with particular attention to recent inter-imperial relationships.

P. & G. 211. Seminar in Federal-State Relations (4).

Reports on topics assigned for individual research in the field of recent federal-state relations.

P. & G. 221. Seminar in Public Opinion (2).

Reports on topics assigned for individual research in the field of public opinion.

P. & G. 251. Bibliography of Political Science (2).

This course is intended to acquaint the student with the literature of the various fields of political science and to instruct him in the use of government documents.

P. & G. 261. Research in Political Science (2, 4)—Credit according to work accomplished.

POULTRY HUSBANDRY

P. H. 1. Poultry Production (3)—First semester. Two lectures and one laboratory period a week.

This is a general comprehensive course covering all phases of modern poultry husbandry practices, including breeds, incubation, brooding, housing, feeding, culling, marketing, caponizing, and the economics of production and distribution of poultry products.

For Advanced Undergraduates

P. H. 50. Poultry Biology (3)—Second semester.

This course is designed to provide basic information as a foundation for other courses in poultry. The biology of the fowl is considered with respect to fundamentals of cell development, the development and structure of the digestive, circulatory, respiratory, reproductive and endocrine systems, feathers, growth, and related problems.

P. H. 51. Poultry Breeding (3)—Second semester. Prerequisites, P. H. 1 or 50, Zool. 104.

The inheritance of morphological and physiological characters of poultry are presented. Inheritance of factors related to egg and meat production and quality are stressed. Breeding plans are discussed.

P. H. 52. Poultry Nutrition (3)—First semester. Two lectures and one laboratory period a week.

Nutritive requirements of poultry and the nutrients which meet those requirements are presented. Studies are made of various nutritional diseases commonly encountered under practical conditions.

P. H. 56. Physiology of Hatchability (3)—Second semester. Two lectures and one laboratory period a week.

The physiology of embryonic development as related to principles of hatchability, and problems of incubation encountered in the hatchery industry are discussed. Laboratory exercises stressing fundamentals of hatchability are assigned.

P. H. 58. Commercial Poultry Management (2)—Second semester. Prerequisite, ten hours of poultry husbandry, including P. H. 1.

A symposium on finance, investment, plant layout, specialization, purchase of supplies, management problems in baby chick, egg, broiler, and turkey production, foremanship, advertising, selling, by-products, production and financial records.

For Advanced Undergraduates and Graduates

P. H. 104. Poultry Marketing Problems (2)—First semester. One lecture and one laboratory period a week.

Live and dressed poultry grades, poultry marketing channels, relation of transportation and distribution to quality, methods and costs of marketing live and dressed poultry, dressing, drawing, eviscerating and preparing poultry for the table.

P. H. 105. Egg Marketing Problems (2)—Second semester. One lecture and one laboratory period a week.

Exterior and interior egg quality factors, wholesale and retail grades of eggs, egg marketing channels, relation of transportation and distribution to quality, methods and costs of marketing eggs, candling and preparing eggs for the table.

Poultry Hygiene, see Veterinary Science, V. S. 107.

Avian Anatomy, see Veterinary Science, V. S. 108.

Preservation of Poultry Products, see F. Tech. 108.

P. H. 107. Poultry Industrial and Economic Problems (2)—First semester.

Relation of poultry to agriculture as a whole and its economic importance. Consumer prejudices and preferences, production, transportation, storage, and distribution problems are discussed. Trends in the industry, surpluses and their utilization, poultry by-products, and disease problems, are presented. Federal, state, and private agencies servicing the poultry industry and function performed by each agency are discussed.

P. H. 108. Special Poultry Problems (1-2)—First and second semesters.

For senior poultry students. The student will be assigned special problems in the field of poultry for individual study and report.

For Graduates

P. H. 201. Advanced Poultry Genetics (3)—First semester. Prerequisite, P. H. 51 or equivalent.

This course serves as a foundation for research in poultry genetics. Linkage, crossing-over, inheritance of sex, the expression of genes in development, inheritance of resistance to disease, and the influence of the environment on the expression of genetic capacities are considered.

P. H. 202. Advanced Poultry Nutrition (3)—Second semester. Two lectures and one laboratory period a week. Prerequisite P. H. 52 or equivalent.

A fundamental study of the dietary role of proteins, minerals, vitamins, and carbohydrates is given as well as a study of the digestion and metabolism of these substances. Deficiency diseases as produced by the use of synthetic diets are considered.

P. H. 203. Physiology of Reproduction of Poultry (3)—First semester. Two lectures and one laboratory period a week. Prerequisite, P. H. 56 or its equivalent.

The role of the endocrines in reproduction, especially with respect to egg production, is considered. Fertility, sexual maturity, broodiness, molting, egg formation, ovulation, deposition of egg envelopes, and the physiology of oviposition are studied.

P. H. 204. Seminar (1)—First and second semesters.

Oral reports of current researches by staff members, graduate students, and guest speakers are presented.

P. H. 205. Poultry Literature (1-4)—First and second semesters.

Readings on individual topics are assigned. Written reports required. Methods of analysis and presentation of scientific material are discussed.

P. H. 206. Research—First and second semesters. Credit in accordance with work done.

Practical and fundamental research with poultry may be conducted under the supervision of staff members toward the requirements for the degrees of M.S. and Ph.D.

PRACTICAL ART, see page 298.

PSYCHOLOGY

Psychological Testing and Counseling Bureau. The staff of the Department of Psychology maintains a bureau of vocational and educational guidance on the basis of adequately standardized psychological tests and personal counseling. The services of the bureau are available without charge to students.

Note on prerequisites in Psychology: Except for Psychology 1, Introductory Psychology; Psychology 4, Psychology for Students of Commerce; and Psychology 10, Educational Psychology; all courses in Psychology have the following prerequisites: (1) an introductory course in psychology and (2) permission of the instructor.

Introductory

Psych. 1. Introduction to Psychology (3)—First and second semesters.

A general introduction to typical problems upon which psychologists are at work. Review of experimental investigations of the more fundamental phases of human behavior.

Psych. 2. Applied Psychology I (3)—First semester.

A general introduction to psychological research in the field of medicine, law, criminology, education, public opinion, and propaganda.

Psych. 3. Applied Psychology II (3)—Second semester.

Application of research to practical psychological problems in business and industry, including industrial selection, methods of production, advertising, selling, and market research.

Psych. 4. Psychology for Students of Commerce (3)—(Open only to students in the College of Business and Public Administration).

Topics in applied psychology which relate to practical problems in business and industry.

Educational Psychology Courses

Psych. 10. Educational Psychology (3)—First and second semesters.

Experimental studies of basic psychological problems encountered in education; measurement and significance of individual differences, learning, motivation, and transfer of training.

Psych. 110. Advanced Educational Psychology (3)—Second semester.

An advanced course for teachers and prospective teachers. Systematic approach to advanced problems in educational psychology based upon experimental contributions.

Psych. 115. Detection and Treatment of Defects in Reading (3).

A survey of the psychological problems involved in the discovery and treatment of reading defects at the college level.

Psych. 210. Seminar in Educational Psychology (3)—First semester.

Systematic approach to advanced problems in educational psychology based upon specific experimental contributions.

Psych. 216. Seminar in Clinical Psychology for Teachers (3)—First semester.

A systematic consideration of a clinical procedure in treating student problems of the teacher.

Individual and Social Psychology Courses

Psych. 120. Psychology of Individual Differences (3)—First semester. Prerequisite, Psych. 1 or Psych. 10.

The occurrence, nature, and causes of psychological differences between individuals; methods of measuring these differences; and their importance in education, business and industry.

Psych. 121. Social Psychology (3)—Second semester.

Psychological study of human behavior in social situations; experimental studies of the influence of other persons, of social conflicts and individual adjustment, of the psychology of social institutions and of current social movements.

Psych. 122. Advanced Social Psychology (3)—First semester.

A systematic analysis of motivation, learning, and culture as related to the development of attitudes.

Psych. 123. Psychology of Personality (3)—First semester.

A systematic survey of various approaches to the study of personality.

Psych. 125. Child Psychology (3)—First semester. Prerequisite, Psych. 1.

Analysis of child behavior; motor, intellectual and emotional development, social behavior, parent-child relationships, and problems of the growing personality.

Psych. 126. Psychology of Adolescence (3)—Second semester.

Psychological aspects of development during the adolescent period with emphasis on mental, emotional, and physical problems.

Psych. 127. Psychology of Early Man (3)—Second semester.

A study of cultural and anthropological origins and continuities in man from Pithecanthropus to the historic period; interpretation of the artifacts and customs in the light of the mental processes involved in their evolution. Periodic observation trips to the Museum of Natural History in Washington.

Psych. 222. Psychology of Propaganda (3)—Second semester.

Analytical survey of research on modern propaganda, its development and dissemination, together with a review of methods for measuring the effects of propaganda.

Clinical and Abnormal Psychology Courses

Psych. 130. Mental Hygiene (3)—First and second semesters. Two lectures, one clinic.

The more common deviations of personality; typical methods of adjustment.

Psych. 131. Abnormal Psychology (3)—Second semester. Two lectures, one clinic.

The nature, occurrence, and causes of psychological abnormality with emphasis on the clinical rather than theoretical aspects.

Psych. 234. Field Work in Clinical Psychology of the Abnormal (3-5)—First and second semesters.

Supervised training in the field of clinical psychology and in testing of the abnormal person. Field work will be done at St. Elizabeth's Hospital or other authorized institutions. Enrollment limited.

Psychology in Advertising and Market Research

Psych. 140. Psychological Problems in Market Research (3).

Use of research techniques in determining public reactions to merchandise, and in measuring the psychological influences at work in particular markets.

Psych. 141. Psychology in Advertising and Selling (3).

Experimental and statistical studies of psychological aspects of advertising.

Psych. 245. Advanced Psychological Problems in Market Research (3).

Graduate study of the specialized problems and techniques employed by the psychologist in market research.

Tests and Measurements

Psych. 150. Psychological Tests and Measurements (3)—Second semester. Laboratory fee $4.00.

Critical survey of psychological tests used in vocational orientation and in industry with emphasis on methods by which such tests are validated; practice in the use of tests and the interpretation of test data.

Psych. 151. Individual Psychological Testing (3)—First semester. Laboratory fee $4.00.

A thorough treatment of individual testing procedures with emphasis on the Stanford-Binet and Wechsler-Bellevue techniques; practice in test administration, scoring, interpretation and application in educational, vocational, and clinical guidance.

Psych. 152. Advanced Psychological Testing (3)—Second semester. Laboratory fee $4.00.

Instruction and practice in the use of individual psychological tests with emphasis on diagnostic methods, other than of general ability; intensive training in the application of these methods to the needs of the school, clinic, court, and social agency.

Psych. 155. Vocational Orientation (3).

Psychological methods and results for occupational classification, and for worker selection, classification, and individual orientation.

Psych. 156. Interpretation of Statistics in Psychology (3)—Second semester.

The practical use of statistical concepts, methods, and terminology as a basis for understanding and evaluating psychological investigation. Emphasis both on computation and interpretation.

Psych. 250. Participation in Testing Clinic (2-4)—First and second semester.

Actual practice in the administration of tests of aptitude, interest, and achievement, and interpretation of test data in the course of routine operation of the testing and counseling bureau.

Psych. 251. Development and Validation of Psychological Tests (3).

Methods for evaluating criteria and for the analysis and combination of test and predictor items.

Psych. 255. Occupational Psychology (3).

Experimental development and use of the vocational counseling interview, aptitude tests, and related techniques for the occupational orientation of youth.

Industrial and Personnel Psychology

Psych. 160. Industrial Psychology (3)—First semester.

Research applied to psychological problems in industrial production, including psychological effects of conditions and methods of work.

Psych. 161. Psychology of Personnel (3)—First semester.

Psychological problems in the management of personnel in modern business and industry. A consideration of psychological techniques in employee selection and classification measures of ability, interview procedures, and personnel counseling.

Psych. 162. Advanced Psychology of Personnel (3)—Second semester.

A continuation of Psych. 161, with emphasis on methods of developing and maintaining personnel efficiency and morale; problems of training, rating methods, motivation, etc.

Psych. 163. Psychological Techniques in Training (3)—Second semester.

Experimental psychology of learning applied to problems of training in business and industry, the armed services, and social relationships.

Psych. 167. Psychological Problems in Aviation (3)—Prerequisite, Psych. 120.

Study of researches dealing with human response to conditions encountered during flight.

Psych. 260. Seminar in Personnel Psychology (2)—Second semester.

Psychological techniques applied to problems of employee morale in business and industry.

Psych. 262. Seminar in Personnel Counseling (3)—First semester.

Consideration of psychological activities involving face-to-face counseling techniques as they relate to business and industry.

Varied Specialties in Psychology

Psych. 170. Legal Psychology (3).

Interpretation of researches pertaining to accuracy of observation and of testimony; psychological aids in determination of guilt and treatment of the offender.

Research in Psychology

Psych. 190, 191. Techniques of Investigation in Psychology (6)—First and second semester.

A consideration of quantitative methods in psychology, the design of experiments, and actual practice in various methods of obtaining data and in treating these results for interpretation.

Psych. 192. Independent Study in Psychology (1-3)—First and second semester.

Special reading and report assignments on an individualized basis.

Psych. 195. Minor problems in Psychotechnology (2-3)—First and second semester.

Conduct of original research under the supervision of some member of the staff. Satisfactory completion of this project may lead to publication in one of the standard psychological journals.

Psych. 197. Proseminar: Contemporary Problems in Psychology.

Psych. 290. Problems in Experiment Design in Psychology (2)—Second semester.

Application of advanced research techniques to specific fields in psychology with practice in their use.

Psych. 297. Seminar in Current Psychotechnological Problems (3).

An advanced course for students pursuing major graduate studies. A systematic analysis of recent contributions in selected psychotechnological fields.

Psych. 299.—Research in Psychotechnology (3-6)—First and second semester. Credit apportioned to work accomplished.

PUBLIC ADMINISTRATION

For Advanced Undergraduates and Graduates

P. A. 110. Principles of Public Administration (3)—First semester. Prerequisite, Pol. Sci. 4 and Econ. 32.

A functional study of public administration in the United States with special emphasis upon the application of the principles of organization and operation in the administration of the various divisions of government.

P. A. 111. Public Personnel Administration (3)—Second semester. Prerequisite, P. A. 110 and Econ. 160.

A study of civil service practices in the United States with particular reference to the organization of the personnel agency, the classification and compensation plans, the selection of employees and supervision of governmental personnel.

P. A. 114. Public Budgeting (3)—Prerequisite, B. A. 21 and Econ. 32.

A study of budgetary administration in the United States, including systems of financial control and accountability, the settlement of claims, centralized purchasing and the reporting of financial operations.

P. A. 124. Governmental Accounting (3)—Second semester. Prerequisite, B. A. 124.

The content of this course covers the scope and functions of governmental accounting. It considers the principles generally applicable to all forms and types of governmental bodies and a basic procedure adaptable to all governments. It deals with governmental accounting as a distinct field and develops and presents the system, taking full account of the conditions governing the agencies and operations carried on by government.

P. A. 126. Government and Social Security (3)—Second semester. Prerequisite, Pol. Sci. 4, Econ. 32.

An analysis of the Federal Social Security Act with special emphasis upon the background, purposes, administration, and deficiencies. Attention will be given also to employment assurance and relief agencies and policies, and to the efforts of European countries and the 48 states to provide a greater measure of security.

P. A. 130. International Economic Policies and Relations (3)—First semester. Prerequisite, Econ. 32 or 37. Econ. 131 recommended.

This course surveys and analyzes the basic economic, social and political factors that influence governments in the determination of their economic policies and practices in their relationship with other nations.

P. A. 137. Economic Planning and Post-war Problems (3)—Second semester. Prerequisite, Econ. 32 or 37. Econ. 131 recommended.

An analysis of the theory and practice of economic planning in the United States and other countries, and an investigation of the relation of economic planning to postwar economic problems and the stabilization of economic enterprise.

P. A. 140. Public Finance and Taxation (3)—First semester. Prerequisite, Econ. 32 or 37.

A study of government fiscal policy in regard to the nature of public expenditures, sources of public revenue, the tax system, the public debt, and government budgets.

P. A. 141. International Finance and Exchange (3)—Second semester. Prerequisite, Econ. 140, Econ. 141 recommended.

This course considers the theory and practice of international finance and exchange. The increased importance of public authority in foreign trade, international policies, and finance is given due emphasis.

P. A. 161. Recent Labor Legislation and Court Decisions (3)—Second semester. Prerequisite, Econ. 160. B. A. 160 recommended.

A study of society's efforts through legislation to improve labor conditions. State and federal laws and court decisions affecting wages, hours, working conditions, immigration, convict labor, union activities, industrial disputes, collective bargaining, and economic security.

P. A. 170. Transportation I, Regulation of Transportation Services (3)—First semester. Prerequisite, Econ. 32 or 37.

This course is designed for students of Transportation, Public Administration, and General Business. It covers the world practices in the regulation and control of transportation facilities.

P. A. 180. Government and Business (3)—First semester. Prerequisite, Econ. 32 or 37. Senior standing.

A study of the role of government in modern economic life. Social control of business as a remedy for the abuses of business enterprise arising from the decline of competition. Critera of and limitations on government regulation of private enterprise.

P. A. 181. Administrative Law (3)—Second semester. Prerequite, junior standing.

A study of the principles involved in the expansion of the discretion of administrative boards and commissions, including an analysis of their functions; their powers over private rights; their procedure in making findings; the enforcement of their rules and orders; and judicial control of their actions.

P. A. 184. Public Utilities (3)—Second semester. Prerequisite, Econ. 32 or 37 and senior standing.

This course comprises an analysis of the economic, social, and political status of the public utility industry. The following topics are among those studied during the semester: Regulation and management with attention given to the economic conditions of production and sale of utility services, legal and social nature, valuation, depreciation, rate of return, ratemating, financing and special problems.

For Graduates

P. A. 201. Seminar in International Organization (3)—(Arranged.)

A study of the forms and functions of various international organizations.

P. A. 213. Problems of Public Administration (3)—(Arranged.)

Reports on topics assigned for individual research in the field of national and state administration.

P. A. 214. Problems of Public Personnel Administration (3).

Reports on topics assigned for individual research in the field of public personnel administration.

P. A. 235. Seminar in International Economic Relations (3)—(Arranged.)

A study of selected problems in International Economic Relations.

P. A. 240. Research in Governmental Fiscal Policies and Practices (3)—(Arranged.)

Individual research under faculty guidance of special problems in the field of government finance and taxation.

P. A. 280. Seminar in Business and Government Relationships—(Arranged.)

A study of selected problems in the relationship of government to business.

P. A. 284. Seminar in Public Utilities (3)—Prerequisite, P. A. 184 and consent of instructor.

Study and research in particular problems of public utility management and regulation.

P. A. 299. Thesis (3-6 hours)—(Arranged.)

SECRETARIAL TRAINING

S. T. 1. Principles of Typewriting (2)—First and second semesters. Five laboratory periods per week. Laboratory fee $7.50.

The goal of this course is the attainment of the ability to operate the typewriter continuously with reasonable speed and accuracy by the use of the "touch" system.

S. T. 2. **Intermediate Typewriting (2)**—Second semester. Five periods per week. Laboratory fee $7.50. Prerequisite, minimum of grade "C" in S. T. 1 or consent of instructor.

The aim of this course is to teach the fundamentals of letter writing and to continue the development of speed typing. Problems in business letter styles and forms, arrangement of letters, tabulation, and exercises for improving stroking skill will be used.

S. T. 10. **Office Typewriting Problems (2)**—First semester. Five periods per week. Laboratory fee $7.50. Prerequisite, minimum of grade of "C" in S. T. 2 or consent of instructor.

In this course the aims are to develop the highest degree of accuracy and speed possible for each student and to teach the advanced techniques of typewriting with special emphasis on production.

S. T. 12, 13. **Principles of Shorthand (4, 4)**—First and second semesters. Five periods per week. Prerequisite, consent of instructor.

This course aims to develop the mastery of the principles of Gregg Shorthand. The reading approach is used, stressing reading and writing from copy and dictation.

†S. T. 16. **Advanced Shorthand (3)**—First semester. Five periods per week. Prerequisite, minimum grade of "C" in S. T. 13 and S. T. 2 or consent of instructor.

Advanced principles and phrases of shorthand; dictation covering vocabularies of representative businesses; development of dictation skill to maximum for each individual.

*S. T. 17. **Gregg Transcription (2)**—First semester. Four periods per week. Laboratory fee $7.50. Prerequisite, minimum grade of "C" in S. T. 13 and S. T. 2 or consent of instructor.

A course in intensive transcriptional speed building, and in the related skills and knowledges.

S. T. 18. **Gregg Shorthand Dictation (3)**—Second semester. Five periods per week. Prerequisite, minimum grade of "C" in S. T. 16 and S. T. 17, or consent of instructor.

A special course in shorthand speed building with emphasis placed on the development of a special shorthand vocabulary.

S. T. 110. **Secretarial Work (3)**—First semester. Six periods per week. Prerequisite, S. T. 111 and S. T. 112 or consent of instructor.

This course is designed to cover specific and general information in addition to the stenographic skills, needed by a secretary. Units will be assigned on communication procedures and cost, installation and revision of files, selection of office equipment and supplies, editorial duties, compilation of statistical data, and use of reference books. It is assumed that stenographic skills are obtained from other sources.

---

* S. T. 10 should be completed prior to enrollment in Advanced Shorthand (S. T. 16).

†S. T. 16, Advanced Shorthand, and S. T. 17, Gregg Transcription, must be concurrently.

S. T. 111. Office Machines (3)—First semester. Six periods per week. Prerequisite, junior standing. Laboratory fee, $7.50.

A course designed to give the students training in the use of modern office devices—duplicators, calculators, voice writing machines, and other common office appliances. Some attention is given to supervision of small groups of office workers.

S. T. 112. Filing (2)—Second semester. Four periods per week. Prerequisite, junior standing. Laboratory fee, $7.50.

The development of the principles, procedures, and systems of filing with the use of laboratory sets. Particular emphasis will be placed on how each system may be used.

S. T. 114. Secretarial Office Practice (3)—Second semester. Four times per week. Prerequisite, senior standing and completion of S. T. 110.

The purpose of this course is to give laboratory and office experience to senior secretarial students. A minimum of 60 hours of office experience under supervision is required. In addition each student will prepare a written report on an original problem previously approved.

SHOP, see page 161.

SOCIOLOGY

Sociology 1 and 2 or their equivalent are prerequisite to all other courses in sociology except 5, 13, and 14. Courses 51, 52, and 62 may be taken concurrently with Sociology 2.

Sociology 1, 2, 96, and 186 or their equivalent are required for an undergraduate major in sociology.

Soc. 1. Sociology of American Life (3)—First and second semester.

Sociological analysis of the American social structure; metropolitan, small town, and rural communities; population distribution, composition and change; social organization.

Soc. 2. The Study of Society (3)—First and second semester. Prerequisite, Soc. 1 or sophomore standing.

The basic forms of human association and interaction as exemplified in American society; social process; institutions; culture; human nature and personality.

Soc. 5. Anthropology (3)—First semester. Prerequisite, sophomore standing.

Introduction to anthropology; origins of man; development and transmission of culture; backgrounds of human institutions.

Soc. 13. Rural Sociology (3)—First semester. Prerequisite, sophomore standing.

Rural life in America; its people, social organization, culture patterns, and problems.

Soc. 14. Urban Sociology (3)—Second semester. Prerequisite, sophomore standing.

Urban growth and expansion; characteristics of city populations; urban institutional and personality patterns; relations of city and country.

Soc. 51. Social Pathology (3)—First semester.

Personal-social disorganization and maladjustment; physical and mental handicaps; economic inadequacies; programs of treatment and control.

Soc. 52. Criminology (3)—Second semester.

Criminal behavior and the methods of its study; causation; typologies of criminal acts and offenders; punishment, correction, and incapacitation; prevention of crime.

Soc. 62. Social Institutions (3)—Second semester.

Nature and function of social institutions; the perpetuation of behavior through customs and societal norms; typical contemporary American institutions.

Soc. 64. Marriage and the Family (3)—Second semester.

Functions of the family; marriage and family adjustments; factors affecting mate selection, marital relations, and family stability in contemporary social life.

Soc. 71. Introduction to Social Service (4)—First semester.

General survey of the field of social-welfare activities; historical developments; growth, functions, and specialization of agencies and services, private and public.

Soc. 96. Senior Seminar (3)—Second semester. Required of and open only to senior majors in sociology.

Scope, fields and methods of sociology; practical applications of sociological knowledge. Individual study and reports.

For Advanced Undergraduates and Graduates

Sociology 1 and 2 or their equivalent and six additional hours in sociology are prerequisite to courses numbered 100 to 199. Comparable course work in economics, political science, and psychology that is closely related to a particular course may be substituted with Departmental approval for the six additional hours in sociology.

Soc. 113. **The Rural Community** (3)—Second semester.

Comparative study of the structure and functions of rural communities; rural standards of living; rural social trends; rural planning.

Soc. 114. **The City** (3)—First semester.

The rise of urban civilization and metropolitan regions; ecological process and structure; the city as a center of dominance; social problems, control, and planning.

Soc. 118. **Community Organization** (3)—Second semester.

Community organization and its relation to social welfare; analysis of community needs and resources; health, housing, recreation; community centers; neighborhood projects.

Soc. 121, 122. **Population** (3, 3)—First and second semesters.

Population distribution, composition and growth in North America and Eurasia; trends in fertility and mortality; migrations; population prospects and policies.

Soc. 123. **Ethnic Minorities** (3)—First semester.

Basic social processes in the relations of ethnic groups within the state; immigration groups and the Negro in the United States; ethnic minorities in Europe.

Soc. 141. **Sociology of Personality** (3)—First semester.

Development of human nature and personality in contemporary social life; processes of socialization; attitudes, individual differences, and social behavior.

Soc. 144. **Collective Behavior** (3)—Second semester.

Social interaction in mass behavior; communication processes; structure and functioning of crowds, strikes, audiences, mass movements, and the public.

Soc. 145. **Social Control** (3)—First semester.

Forms, mechanisms, and techniques of group influence on human behavior; problems of social control in contemporary society; the sociology of law.

Soc. 153. **Juvenile Delinquency** (3)—First semester.

Juvenile delinquency in relation to the general problem of crime; analysis of factors underlying juvenile delinquency; treatment and prevention.

Soc. 154. **Crime and Delinquency Prevention** (3)—Second semester. (Offered in alternate years with Soc. 156.)

Mobilization of community resources for the prevention of crime and delinquency; area programs and projects.

Soc. 156. **Institutional Treatment of Criminals and Delinquents** (3)—Second semester. (Offered in alternate years with Soc. 154.)

Organization and functions of penal and correctional institutions for adults and juveniles.

Soc. 171. **Family and Child Welfare** (3)—First semester.

Programs of family and child welfare agencies; social services to families and children; child placement; foster families.

Soc. 173. **Social Security** (3)—First semester.

The social security program in the United States; public assistance; social insurance.

Soc. 174. **Public Welfare** (3)—Second semester.

Development and organization of the public welfare movement in the United States; social legislation; interrelations of federal, state, and local agencies and institutions.

Soc. 183. **Social Statistics** (3)—First semester.

Collection, statistical analysis, and interpretation of social data; problems of quantitative measurement of social phenomena.

Soc. 186. **Sociological Theory** (3)—Second semester.

Development of the science of sociology; historical backgrounds; recent theories of society.

For Graduates

Prerequisites for entrance upon graduate study leading to an advanced degree with a major in sociology: either (1) an undergraduate major (totalling at least 30 semester hours) in sociology or (2) 18 semester hours of sociology (including 6 semester hours of advanced courses) and 12 additional hours of comparable work in economics, political science, or psychology. Reasonable substitutes for these prerequisites may be accepted in the case of students majoring in other departments who desire a graduate minor or several courses in sociology.

With the exception of Soc. 201, 291-292, 293-294, individual courses numbered 200 to 299 will ordinarily be offered in alternate years.

Soc. 201. **Social Research** (3)—First semester.

Selection and formulation of research projects; methods and techniques of sociological investigation and analysis. Required of graduate majors in sociology.

Soc. 215. **Community Studies** (3)—First semester.

Intensive study of the factors affecting community development and growth, social structure, social stratification, and social institutions; analysis of particular communities.

Soc. 221. **Population and Society** (3)—Second semester.

Selected problems in the field of population; quantitative and qualitative aspects; American and world problems.

Soc. 224. Race and Culture (3)—Second semester.

Race and culture in contemporary society; mobility and the social effects of race and culture contacts and intermixture.

Soc. 241. Personality and Social Structure (3)—Second semester.

Comparative analysis of the development of human nature, personality, and social traits in select social structures.

Soc. 246. Public Opinion and Propaganda (3)—Second semester.

Processes involved in the formation of mass attitudes; agencies and techniques of communication; quantitative measurement of public opinion.

Soc. 253. Advanced Criminology (3)—First semester.

Critical survey of the principal issues in contemporary criminological theory and research.

Soc. 255. Seminar: Juvenile Delinquency (3)—First semester.

Selected research problems in the field of juvenile delinquncy.

Soc. 257. Social Change and Social Policy (3)—First semester.

Emergence and development of social policy as related to social change; policy-making factors in social welfare and social legislation.

Soc. 262. Family Studies (3)—Second semester.

Case studies of family situations; statistical studies of family trends; methods of investigation and analysis.

Soc. 282. Sociological Methodology (3)—Second semester.

Logic and method of sociology in relation to the general theory of scientific method; principal issues and points of view.

Soc. 285. Seminar: Sociological Theory (3)—First semester.

Critical and comparative study of contemporary European and American theories of society.

Soc. 291, 292. Research Seminar (3, 3)—First and second semester.

Individual investigations in selected fields of study; reports and discussions.

Soc. 293, 294. Research Seminar (3, 3)—First and second semester.

Individual investigations in selected fields of study; reports and discussions. For students who have completed Soc. 291, 292.

SPEECH

The courses in this department have two main functions: (1) to provide work in public speaking and allied fields which will meet the needs of all students in the university; (2) to provide an integrated unit of work which will allow a student to major in Speech. A major shall consist of a minimum of 30 hours of which 15 hours must be in courses numbered

100 and above. A student majoring in Speech may concentrate in: (a) public speaking; (b) drama; (c) speech sciences; (d) radio. A minor shall consist of 12-18 credits of which 9 must be in courses numbered 100 and above.

Speech 1, 2. Public Speaking (2, 2)—First and second semesters. Prerequisite for advanced speech courses. Credit will not be given for one semester's work.

The preparation and delivery of short original speeches; outside readings; reports; etc. It is recommended that this course be taken during the freshman year. Laboratory fee $1.00 for Speech 1.

Speech Clinic—No credit.

Remedial work in minor speech defects. The work of the clinic is conducted in individual conferences and in small group meetings. Hours arranged by consultation with the respective speech instructor.

Speech 3. Fundamentals of Speech (3)—First semester.

Study in the bases and mechanics of speech. This course is designed for students who expect to do extensive work in speech. May be taken concurrently with Speech 1, 2.

Speech 4. Voice and Diction (3)—Second semester.

Emphasis upon the improvement of voice, articulation, and phonation. May be taken concurrently with Speech 1, 2.

Speech 5, 6. Advanced Public Speaking (2, 2)—First and second semesters. Prerequisite, Speech 1, 2, or consent of the instructor.

Advanced work on basis of Speech 1, 2. Special emphasis is placed upon speaking situations the students will face in their respective vocations.

Speech 7. Public Speaking (2)—Second semester. Limited to freshman engineering students. The preparation and delivery of speeches, reports, etc., on technical and general subjects.

Speech 8, 9. Acting (3, 3)—First and second semesters. Admission by consent of instructor.

Basic principles of histrionic practice.

Speech 10. Group Discussion (2)—First and second semesters.

A study of the principles, methods, and types of discussion, and their application in the discussion of contemporary problems.

Speech 11, 12. Debate (2, 2)—First and second semesters.

A study of the principles of argument, analysis, evidence, reasoning, fallacies, briefing, and delivery, together with their application in public speaking.

Speech 13. Oral Interpretation (3)—First semester.

The oral interpretation of literature and the practical training of students in the art of reading.

Speech 14. Stagecraft (3)—First semester.

Fundamentals of technical production. Emphasis on construction of scenery.

Speech 15. Stagecraft (3)—Second semester.

Technical production. Emphasis on stage lighting. Prerequisite, Speech 14.

Speech 16. Introduction to the Theatre (3)—First semester.

A general survey of the fields of the theatre.

Speech 17. Make-up (2)—Second semester. One lecture and one laboratory a week.

A lecture-laboratory course in the theory and practice of stage make-up, covering basic requirements as to age, type, character, race, and period. Laboratory fee $2.00.

Speech 18, 19. Introductory Speech (2)—First and second semesters.

This course is designed to give those students practice in public speaking who cannot schedule Speech 1, 2. Credit will not be given for one semester's work. Laboratory fee $1.00 for Speech 18.

Speech 20. History of the Theatre (3)—First semester.

A survey of dramatic production from early origins to 1800.

Speech 21. History of the Theatre (3)—Second semester.

A survey of dramatic production from 1800 to the present.

Speech 22. Introduction to Radio (3)—First and second semesters. Prerequisite for all courses in Radio.

The development, scope, and influence of American broadcasting.

For Advanced Undergraduates and Graduates

Speech 101. Radio Speech (3)—First semester. Prerequisite, Speech 4.

The theory and application of microphone techniques. Practice in all types of radio speaking. Laboratory fee $2.00.

Speech 102. Radio Production (3)—Second semester.

A study of the multiple problems facing the producer. Special emphasis is given to acoustic setup, casting, "miking", timing, cutting, and the coordination of personnel factors involved in the production of radio programs. Admission by consent of instructor.

Speech 103, 104. Speech Composition and Rhetoric (3, 3)—First and second semesters.

A study of rhetorical principles and models of speech composition in conjunction with the preparation and presentation of specific forms of public address.

Speech 105. Pathology (3)—First semester.

The causes, nature, symptoms, and treatment of common speech disorders.

Speech 106. Clinic (3)—Second semester. Prerequisite, Speech 105.

A laboratory course dealing with the various methods of correction plus actual work in the clinic both on and off the campus.

Speech 107. Advanced Oral Interpretation (3)—Second semester. Prerequisite, Speech 13.

Emphasis upon the longer reading. Program planning.

Speech 108. Public Speaking (2)—Second semester. Limited to Junior Engineers. Prerequisite, Speech 7.

Continuation of Speech 7 with emphasis upon engineering projects that fall within student's own experience.

Speech 109. Speech Seminar for Senior Engineers (2)—Prerequisite, Speech 7, 108.

Speech 110. Teacher Problems in Speech (3)—Second semester. For students who intend to teach.

Every-day speech problems that confront the teacher.

Speech 111. Seminar (3)—Second semester. Required of speech majors.

Present-day speech research.

Speech 112. Phonetics (3)—Second semester.

Training in the recognition and production of the sounds of spoken English, with an analysis of their formation. Practice in transcription. Mastery of the international phonetic alphabet.

Speech 113. Play Production (3)—Second semester.

Development of procedure followed by the director in preparing plays for public performance.

Speech 114. Costuming (3)—First semester. One lecture and two laboratories a week.

Consideration of the use of color, line, and texture in designing, constructing, and adapting costumes for the stage.

Speech 115. Radio in Retailing (3)—First semester. Limited to students in the College of Home Economics. Prerequisites, Speech 1, 2. English 1, 2. Junior standing. Laboratory fee $2.00.

Writing and production of promotional programs for the merchandising of wearing apparel and housefurnishings. Collaboration with Washington and Baltimore radio stations and retail stores.

Speech 116. Radio Announcing (3)—Second semester. Prerequisite, Speech 101.

The theory and application of all types of announcing. Laboratory fee $2.00.

Speech 117. Radio Continuity Writing (3)—First semester.

A study of the principles and methods of writing for broadcasting. Application will be made in the writing of the general types of continuity. Admission by consent of instructor.

Speech 118. Advanced Radio Writing (3)—Second semester. Prerequisite, Speech 117.

Advanced work with emphasis upon the dramatic form. Admission by consent of instructor.

Speech 119. Radio Acting (3)—Second semester.

A workshop course designed to give the student practice in radio acting. Admission by consent of the instructor.

Speech 120. Advanced Speech Pathology (3)—Second semester. Prerequisite, Speech 105.

A continuation of Speech 105, with emphasis on the causes and treatment of organic speech disorders.

Speech 121. Stage Design (3)—Second semester. Prerequisite, Speech 14, 15.

The planning of stage settings and the application of the principles of design to the dramatic production. Admission by consent of the instructor.

SURVEYING

Surv. 1, 2. Plane Surveying (2, 2)—First and second semesters. One lecture and one laboratory period a week. Surv. 1 required of sophomores in Aeronautical, Chemical, Electrical, and Mechanical Engineering. Surv. 1, 2 required of sophomores in Civil Engineering.

Theory and practice in the use of the tape, compass, transit, and level. General survey methods, traversing, area, coordinates, profiles, cross-sections, volume, stadia.

Surv. 100. Advanced Surveying (4)—First semester. Two lectures and two laboratory periods a week. Prerequisite, Surv. 1, 2.

Adjustment of instruments, latitude, longitude, azimuth, time, triangulation, precise leveling, geodetic surveying, together with the necessary adjustments and computations. Topographic surveys. Plane table, land surveys, and boundaries. Mine, tunnel, and hydrographic surveys. Aerial photogrammetry.

TEXTILES AND CLOTHING, see page 296.

VETERINARY SCIENCE

For Advanced Undergraduates and Graduates

V. S. 101. Comparative Anatomy (3)—First semester.

Normal structure of the domesticated animals; normal physiological activities; interrelationship of structure and function.

V. S. 102. Animal Hygiene (3)—Second Semester.

Nature of disease; immunity; treatment, prevention, and control; common diseases of farm animals.

V. S. 107. Poultry Hygiene (3)—First semester. Two lectures and one laboratory. Prerequisite, Bact. 1; P. H. 106 F.

Bacterial and protozoan diseases; parasitic diseases; prevention, control, and eradication.

V. S. 108. Avian Anatomy (3)—Second semester. Two lectures and one laboratory. Prerequisite, Zool. 1 s.

Gross and microscopic structure; physiological processes; dissection and demonstration.

For Graduates

V. S. 201. Animal Disease Problems (2-6)—First and second semesters. Credit depending upon work done. Prerequisite, Veterinary degree or consent of Staff.

Laboratory and field work by assignment.

V. S. 202. Animal Disease Research (2-6)—First and second semesters. Credit depends on work done. Prerequisite, Veterinary degree or consent of Staff.

Studies of practical disease phases.

ZOOLOGY

Zool. 1. General Zoology (4)—First and second semesters. Two lectures and two laboratory periods a week.

This course, which is cultural and practical in its aim, deals with the basic principles of animal life. Typical invertebrates and a mammalian form are studied. Laboratory fee $6.00.

Zool. 2, 3. Fundamentals of Zoology (4, 4)—First and second semesters. Two lectures and two laboratory periods a week. This course satisfies the freshman premedical requirements in general biology. Freshmen who intend to choose zoology as a major should register for this course.

A thorough study of the anatomy, classifications, and life histories of representative animals. During the first semester emphasis is placed on invertebrate forms and during the second semester upon vertebrate forms including the frog. Laboratory fee $6.00 each semester.

Zool. 4. Advanced General Zoology (4)—Second semester. Three lectures and one laboratory period a week. Prerequisite, Zoology 1.

A continuation course for students who desire more advanced work after completing General Zoology. Emphasis is placed on the vertebrates and upon practical application of zoology. Laboratory fee $6.00.

Zool. 5. Comparative Vertebrate Morphology (4)—First semester. Two lectures and two laboratory periods a week. Prerequisite, one course in zoology.

A comparative study of selected organ systems in certain vertebrate groups. Laboratory fee $6.00.

Zool. 14, 15. **Human Anatomy and Physiology (4, 4)**—First and second semesters. Two lectures and two laboratory periods a week. Prerequisite, one course in zoology.

For students who desire a general knowledge of human anatomy and physiology. Laboratory fee $6.00 each semester.

Zool. 16. **Human Physiology (4)**—First semester. Two lectures and two laboratory periods a week. Not open to freshmen.

An elementary course in physiology. Laboratory fee $6.00.

Zool. 20. **Vertebrate Embryology (4)**—Second semester. Two lectures and two laboratory periods a week. Prerequisites, one course in Zoology.

The development of the chick to the end of the fourth day and early mammalian embryology. Laboratory fee $6.00.

Zool. 53. **Physiology of Exercise (2)**—Second semester. One lecture and one laboratory period a week. Prerequisite, Human Anatomy and Physiology.

A detailed consideration of the mechanism of muscular contraction; the metabolic, circulatory, and the respiratory responses in exercise; and the integration by means of the nervous system. Laboratory fee $6.00.

Zool. 55. **Development of the Human Body (2)**—First semester. Two lecture periods a week.

A study of the main factors affecting the growth and development of the child with especial emphasis on normal development.

Zool. 75, 76. **Journal Club (1, 1)**—First and second semesters. One lecture period a week. Prerequisite, a major in Zoology.

Reviews, reports, and discussions of current literature.

For Graduates and Advanced Undergraduates

Zool. 101. **Mammalian Anatomy (3)**—Second semester. Three laboratory periods a week. Registration limited. Permission of the instructor must be obtained before registration. Recommended for premedical students, and those whose major is zoology.

A course in the dissection of the cat or other mammal. By special permission of the instructor a vertebrate other than the cat may be used for study. Laboratory fee $6.00.

Zool. 102, 103. **General Animal Physiology (3, 3)**—First and second semesters. Two lectures and one laboratory period a week. Prerequisites, one year of zoology and one year of chemistry.

The general principles of physiological functions as shown in mammals and lower animals. Laboratory fee $6.00 each semester.

Zool. 104. Genetics (3)—First semester. Three lecture periods a week. Prerequisite, one course in zoology or botany. Recommended for premedical students.

A consideration of the basic principles of heredity.

Zool. 106. Histological Technique (3)—Second semester. One lecture and two laboratory periods a week. Prerequisite, one semester of zoology. Permission of the instructor must be obtained before registration.

The preparation of animal tissues for microscopical examination. Laboratory fee $6.00.

Zool. 108. Animal Histology (4)—First semester. Two lectures and two laboratory periods a week. Prerequisite, one year of zoology.

A microscopic study of tissues and organs selected from representative vertebrates, but with particular reference to the mammal. Laboratory fee $6.00.

Zool. 110. Parasitology (3)—First semester. Two lectures and one laboratory period a week. Prerequisite, one year of zoology.

A study of the morphology, physiology and life cycles of animal parasites with special emphasis on practical problems in parasite control and disease prevention. Laboratory fee $6.00.

Zool. 114. Field Zoology (3)—Second semester. One lecture and two laboratory periods a week. Prerequisite, one year of zoology.

This course consists in collecting and studying both land and aquatic forms of nearby woods, fields, and streams, with emphasis on the higher invertebrates and certain vertebrates, their breeding habits, environment, and modes of living. Laboratory fee $6.00.

Zool. 118. Invertebrate Zoology (4)—First semester. Two lectures and two laboratory periods a week. Prerequisite, General Zoology and Vertebrate Embryology.

An advanced course dealing with the taxonomy, morphology, and embryology of the invertebrates, exclusive of insects. Laboratory fee $6.00.

Zool. 121. Principles of Animal Ecology (3)—Second semester. Two lectures and one laboratory period a week. Prerequisite, one course in zoology and one course in chemistry.

Animals are studied in relation to their natural surroundings. Biological, physical and chemical factors of the environment which affect the growth, behavior, habits and distribution of animals are stressed. Laboratory fee $6.00.

Zool. 125. Fisheries Biology (3)—First semester. Two lectures and one laboratory period a week. Prerequisites, Comparative Vertebrate Morphology and one year of Physiology.

Problems concerning fresh and salt water life in relation to their practical application in fisheries work. Laboratory fee $6.00.

For Graduates

Zool. 200. Ichthyology and Marine Zoology (3)—First semester. Two lectures and one laboratory period per week.

A study of the anatomy, physiology, and habits of fishes and other marine animals of commercial importance. Laboratory fee $6.00.

Zool. 201. Microscopical Anatomy (4)—Second semester. Two lectures and two laboratory periods a week.

A detailed study of the morphology and activity of cells composing animal tissues with specific reference to the vertebrates. Laboratory work includes the preparation of tissues for microscopic examination. Laboratory fee $6.00.

Zool. 202. Animal Cytology (4)—First semester. Two lectures and two laboratory periods a week.

A study of cellular structure with particular reference to the morphology and physiology of cell organoids and inclusions. Laboratory is concerned with methods of studying and demonstrating the above materials. Laboratory fee $6.00.

Zool. 203. Advanced Embryology (4)—Second semester. Two lectures and two laboratory periods a week.

Mechanics of fertilization and growth. A review of the important contributions in the field of experimental embryology. Laboratory fee $6.00.

Zool. 204. Advanced Animal Physiology (4)—First semester. Two lectures and two laboratory periods a week.

The principles of general and cellular physiology as found in animal life. Laboratory fee $6.00.

Zool. 205. Hydrobiology (4)—First semester. Two lectures and two laboratory periods a week.

A study of the biological, chemical, and physical factors which determine the growth, distribution, and productivity of microscopic and near microscopic organisms in marine and freshwater environments with special reference to the Chesapeake Bay region. Laboratory fee $6.00.

Zool. 206. Research (credit to be arranged)—First and second semesters. Laboratory fee $6.00 each semester.

Zool. 207. Zoological Seminar (1)—First and second semesters. One lecture a week.

Zool. 208. Special Problems in General Physiology (3)—Second semester. Hours and credits arranged. Laboratory fee $6.00.

Zool. 220. Advanced Genetics (3)—Second semester. Two lectures and one laboratory period a week. Prerequisite, Zool. 104.

A consideration of salivary chromosomes, the nature of the gene, chromosome irregularities, polyploidy, and mutations. Breeding experiments with Drosophila and small mammals will be conducted. Laboratory fee $6.00.

SECTION IV

Resident Instruction at Baltimore

SCHOOL OF DENTISTRY

J. BEN ROBINSON, *Dean*
KATHARINE TOOMEY, *Administrative Assistant*

The Faculty Council

MYRON S. AISENBERG, D.D.S.
GEORGE M. ANDERSON, D.D.S.
BRICE M. DORSEY, D.D.S.
GRAYSON W. GAVER, D.D.S.
WILLIAM E. HAHN, D.D.S., A.B., M.S.
BURT B. IDE, D.D.S.
HARRY B. MCCARTHY, D.D.S.
ERNEST B. NUTTALL, D.D.S.
J. BEN ROBINSON, D.D.S., D.Sc.

Professors

MYRON S. AISENBERG, D.D.S., Professor of Oral Pathology
GEORGE M. ANDERSON, D.D.S., Professor of Orthodontics
BRICE M. DORSEY, D.D.S., Professor of Oral Surgery
GRAYSON W. GAVER, D.D.S., Professor of Dental Prosthesis
WILLIAM E. HAHN, D.D.S., A.B., M.S., Professor of Anatomy
BURT B. IDE, D.D.S., Professor of Operative Dentistry
HARRY B. MCCARTHY, D.D.S., Professor of Clinical Operative Dentistry
ERNEST B. NUTTALL, D.D.S., Professor of Crown and Bridge
J. BEN ROBINSON, D.D.S., D.Sc., Professor of Dental Anatomy and Operative Technics

Associate Professors

PAUL A. DEEMS, D.D.S., Associate Professor of Dental Anatomy and Instructor in Clinical Orthodontics
EDWARD C. DOBBS, D.D.S., Associate Professor of Pharmacology
KARL F. GREMPLER, D.D.S., Associate Professor of Operative Dentistry
VERNON D. KAUFMAN, D.D.S., Associate Professor of Oral Surgery
MARION W. MCCREA, D.D.S., M.S., Associate Professor of Embryology and Histology
ROBERT H. OSTER, Ph.D., Associate Professor of Physiology
DONALD E. SHAY, Ph.D., Associate Professor of Bacteriology
E. G. VANDEN BOSCHE, Ph.D., Associate Professor of Biochemistry
J. HERBERT WILKERSON, M.D., Associate Professor of Anatomy and Oral Surgery

Assistant Professors

RUPERT S. ANDERSON, Ph.D., Assistant Professor of Physiology

JOSEPH C. BIDDIX, JR., D.D.S., Assistant Professor of Clinical Operative Dentistry

STANLEY H. DOSH, D.D.S., Assistant Professor of Crown and Bridge

MEYER EGGNATZ, D.D.S., Assistant Professor of Clinical Orthodontics

GARDNER P. H. FOLEY, M.A., Assistant Professor of Dental History and Dental Literature

HAROLD GOLTON, D.D.S., Assistant Professor of Diagnosis

HUGH T. HICKS, D.D.S., Assistant Professor of Peridontology

GEORGE C. KARN, D.D.S., Assistant Professor of Oral Roentgenology

GEORGE MCLEAN, M.D., Assistant Professor of Physical Diagnosis and Principles of Medicine

KENNETH V. RANDOLPH, D.D.S., Assistant Professor of Clinical Operative Dentistry

GUY P. THOMPSON, A.M., Assistant Professor of Anatomy

L. EDWARD WARNER, D.D.S., Assistant Professor of Clinical Dental Prosthesis

Special Lecturers

HARRY M. ROBINSON, M.D., Professor of Dermatology (School of Medicine)

JOHN S. STRAHORN, JR., A.B., LL.B., S.J.D., J.S.D., Professor of Law (School of Law)

GRANT E. WARD, A.B., M.D., Associate Professor of Surgery and Oral Surgery (School of Medicine)

Instructors

CARL E. BAILEY, D.D.S., Instructor in Dental Prosthesis

GEORGE C. BLEVINS, D.D.S., Instructor in Diagnosis

DOUGLAS A. BROWNING, D.D.S., Instructor in Crown and Bridge

SAMUEL H. BRYANT, A.B., D.D.S., Instructor in Diagnosis

MORRIS E. COBERTH, D.D.S., Instructor in Clinical Pedodontics

BENJAMIN A. DABROWSKI, A.B., D.D.S., Instructor in Clinical Oral Roentgenology

PAUL M. EDWARDS, D.D.S., Instructor in Clinical Oral Pathology

A. BERNARD ESKOW, D.D.S., Instructor in Periodontology

JOSEPHINE V. EZEKIEL, Director of Department of Visual Aids

JOHN M. HYSON, D.D.S., Instructor in Embryology and Histology

CONRAD L. INMAN, D.D.S., Instructor in Anesthetics

WILLIAM KRESS, D.D.S., Instructor in Clinical Orthodontics

RICHARD C. LEONARD, D.D.S., M.S.P.H., Instructor in Public Health Dentistry

ROBERT G. MILLER, D.D.S., Instructor in Dental Anatomy

Eugene L. Pessagno, A.B., D.D.S., Instructor in Clinical Operative Dentistry

Maria T. Petry, B.S., Instructor in Visual Aids

V. S. Primrose, D.D.S., Instructor in Clinical Dental Prosthesis

Nathan B. Scherr, D.D.S., Instructor in Clinical Pedodontics

Felix T. Trommer, D.D.S., Instructor in Clinical Operative Dentistry

W. Kennedy Waller, A.B., M.D., In Charge of Medical Care of Students

B. Sargent Wells, D.D.S., Instructor in Dental Technics

Riley S. Williamson, Jr., D.D.S., Instructor in Clinical Dental Prosthesis and Dental Materials

History

The Baltimore College of Dental Surgery represents the first effort in history to offer institutional dental education to those anticipating the practice of dentistry.

The first lectures on dentistry in America were delivered by Dr. Horace H. Hayden in the University of Maryland, School of Medicine, between the years 1823-25. These lectures were interrupted in 1825 by internal dissensions in the School of Medicine and were discontinued. It was Dr. Hayden's idea that dental education merited greater attention than had been given it by medicine or could be given it by the preceptorial plan of dental teaching then in vogue.

Dr. Horace H. Hayden began the practice of dentistry in Baltimore in 1800. From that time he made a zealous attempt to lay the foundation for a scientific, serviceable dental profession. In 1831 Dr. Chapin A. Harris came to Baltimore to study under Hayden. Since Dr. Hayden's lectures had been interrupted at the University of Maryland and there was an apparent unsurmountable difficulty confronting the creation of dental departments in medical schools, an independent college was decided upon. A charter was applied for and granted by the Maryland Legislature February 1, 1840. The first Faculty meeting was held February 3, 1840, at which time Dr. Horace H. Hayden was elected President and Dr. Chapin A. Harris, Dean. The introductory lecture was delivered by Dr. Hayden on November 3, 1840, to the five students matriculating in the first class. Thus was created as the foundation of the present dental profession the Baltimore College of Dental Surgery, the first dental school in the world.

In 1839 the *American Journal of Dental Science* was founded, with Chapin A. Harris as its editor. Dr. Harris continued fully responsible for dentistry's initial venture into periodic dental literature to the time of his death. The files of the old *American Journal of Dental Science* testify to the fine contributions made by Dr. Harris. In 1840 the American Society of Dental Surgeons was founded, with Dr. Horace H. Hayden as its President. He continued as its President until his death in 1844. This Society was the beginning of dental organization in America, and was the forerunner of the American Dental Association, which now numbers approximately fifty-nine thousand in its present membership. The foregoing description of important incidents in Baltimore suggests the unusual influence Baltimore dentists and the Baltimore College of Dental Surgery have exercised on the professional ideals and policies of American dentistry.

The Baltimore College of Dental Surgery became the Dental School of the University of Maryland in 1923.

Building

The School of Dentistry is located at the northwest corner of Lombard and Greene Streets, adjoining the University Hospital. The building occupied by the Dental School provides approximately fifty thousand square feet of floor space, is fireproof, splendidly lighted and ventilated, and is ideally arranged for efficient use. It contains a sufficient number of large lecture rooms, classrooms, a library and reading room, science laboratories, technic laboratories, clinic rooms, and locker rooms. It is furnished with new equipment throughout.

The Dental School is fortunate in having one of the better equipped and organized dental libraries among the dental schools of the country. The Library is located in the main building and consists of a stack room, offices and a reading room accommodating ninety-six students. Over 10,000 books and bound journals on dentistry and the collateral sciences, together with numerous pamphlets, reprints and unbound journals are available for the student's use. More than 160 journals are regularly received by the Library. An adequate staff promotes the growth of the Library and assists the student body in the use of the Library's resources. The Library is financed by direct appropriations from the State, by the income from an endowment established by the Maryland State Dental Association and by the proceeds of the sale of books to students. One of the most important factors of the dental student's education is to teach him the value and the use of dental literature in his formal education and in promoting his usefulness and value to the profession during practice. The Baltimore College of Dental Surgery is ideally equipped to achieve this aim of dental instruction.

Course of Instruction

The Baltimore College of Dental Surgery, Dental School, University of Maryland, offers a four-year course in dentistry devoted to instruction in the medical sciences, the dental sciences, and clinical practice.

Requirements for Admission to the School of Dentistry

Applicants for admission must present evidence of having successfully completed two full years of work in an accredited college of arts and sciences based upon the completion of a four-year high-school course. No applicant will be considered who has not completed all requirements for advancement to the Junior year in the arts and sciences college from which he applies. His scholastic attainments shall be of such quality as to insure a high standard of achievement in the dental course.

The college course must include at least a year's credit in English, in biology, in physics, and in inorganic chemistry, and a half year's credit in organic chemistry. All courses in science should include both class and laboratory instruction. Formal credit in biology and physics, but not in English and chemistry, may be waived in the case of exceptional students with three years of college credit or in the case of those holding a bachelor's or other degree from an accredited college.

The credentials of all students admitted to the Dental School, University of Maryland under the foregoing permissive regulation will be submitted for approval to the Council on Education of the American Dental Association.

Requirements for Matriculation and Enrollment

In the selection of students to begin the study of dentistry the School considers particularly a candidate's proved ability in secondary education and his successful completion of prescribed courses in predental collegiate training. The requirements for admission and the academic regulations of the College of Arts and Sciences, University of Maryland, are strictly adhered to by the School of Dentistry.

Fees and Expenses

A complete schedule of all fees and other expenses will be found in the separate Catalogue of the School of Dentistry, a copy of which may be obtained from Dean, School of Dentistry, University of Maryland, Lombard and Greene Streets, Baltimore-1, Maryland.

Advice to Predental Students

Students registered in the Predental Curriculum should secure a copy of the latest catalogue of the School of Dentistry early in their first year in college, in order to acquaint themselves with the requirements for admission.

THE SCHOOL OF LAW

ROGER HOWELL, Dean.
GERTRUDE M. ANDERTON, Secretary to Dean.

The Faculty Council

RANDOLPH BARTON, JR., ESQ., A.B., LL.B.
HON. W. CALVIN CHESTNUT, A.B., LL.B.
EDWIN T. DICKERSON, ESQ., A.M., LL.B.
ROGER HOWELL, ESQ., A.B., Ph.D., LL.B.
G. KENNETH REIBLICH, A.B., Ph.D., J.D., LL.M.
EDWIN G. W RUGE, ESQ, AB., LL.B.
G. RIDGELY SAPPINGTON, ESQ., LL.B.
HON. MORRIS A. SOPER, A.B., LL.B.
JOHN S. STRAHORN, JR., A.B., LL.B., S.J.D., J.S.D.

Faculty

BRIDGEWATER M. ARNOLD, A.B., LL. B., Professor of Law
GEORGE O. BLOME, LL.B., Director of Practice Court
J. WALLACE BRYAN, A.B., Ph.D., LL.B., Lecturer on Pleading
JAMES T. CARTER, A.B., LLB., Ph.D., Lecturer on Contracts
RICHARD W. CASE, A.B., LL.B., Lecturer on Taxation
HON. ELI FRANK, A.B., LL. B., Professor Emeritus of Law
ROGER HOWELL, A.B., Ph.D., LL.B., Dean and Professor of Law
FREDERICK W. INVERNIZZI, A.B., LL.B., Assistant Professor of Law
LAURENCE M. JONES, A.B., J.D., LL.M., S.J.D., Visiting Professor of Law
GERALD MONSMAN, A.B., LL.B., J.D., Supervisor Legal Aid Clinic
HON. EMORY H. NILES, A.B., B.A., B.C.L., M.A., LL.B., Lecturer on Admiralty and Evidence
G. KENNETH REIBLICH, A.B., Ph. D., J.D., LL.M., Professor of Law
RUSSELL R. RENO, A.B., LL.B., LL.M., Professor of Law
EDWIN G. W. RUGE, A.B., LL.B., Professor of Law
G. RIDGELY SAPPINGTON, LL.B., Lecturer on Practice
JOHN S. STRAHORN, JR., A.B., LL.B., S.J.D., J.S.D., Professor of Law
R. DORSEY WATKINS, A.B., Ph.D., LL.B., Lecturer on Torts

Academic Standing

The School of Law is a member of the Association of American Law Schools, an association composed of the leading law schools in the United States, whose member schools are required to maintain high standards of entrance requirements, factulty, library and curriculum. It, also, has been officially recognized by the Council of Legal Education of the American Bar Association as meeting the standards of that association, and has been placed upon its approved list. It is registered as an approved law school on the New York Regents' list. It is the only school in Maryland so recognized or which offers what is regarded by those agencies as proper preparation for the practice of law and whose standards of admission and instruction meet with their approval.

History

While the faculty of law of the University of Maryland was chosen in 1813, and published in 1817 "A Course of Legal Study Addressed to Students and the Profession Generally," which the North American Review pronounced to be "by far the most perfect system for the study of law which has ever been offered to the public," and which recommended a course of study so comprehensive as to require for its completion six or seven years, no regular school of instruction in law was opened until 1823. The institution thus established was suspended in 1836 for lack of financial support. In 1869 the School of Law was reorganized, and in 1870 regular instruction therein was resumed. From time to time the course of study has been made more comprehensive and the staff of instructors strengthened. Graduates of the School now number more than three thousand, and include a large proportion of the leaders of the Bench and Bar of the State of Maryland and many who have attained prominence in the profession elsewhere.

Building

The Law School Building is located at the southeast corner of Redwood and Greene Streets, Baltimore. In addition to providing classrooms, and offices for the Law Faculty, it contains a large auditorium, practice-court room, students' lounge and locker rooms, and the law library, the latter containing a collection of some twenty thousand carefully selected textbooks, English and American reports, leading legal periodicals, digests, and standard encyclopedias. The library is open from 9.00 a. m. to 10.30 p. m. on weekdays.

Organization

The School of Law has two divisions: the Day School for students devoting their full time to the study of law, and the Evening School for part-time students. The same curriculum is offered in each school, and the standards of work and graduation requirements are the same.

The *Day School* course covers a period of three years of thirty-two weeks each, exclusive of holidays. The class sessions are held during the day, chiefly in the morning hours. The Practice Court sessions are held on Monday evenings from 8.00 to 10.00 p. m.

The *Evening School* course covers a period of four years of thirty-six weeks each, exclusive of holidays. The class sessions are held on Monday, Wednesday, and Friday evening of each week from 6.30 to 9.40 p. m. This plan leaves the alternate evenings for study and preparation by the student.

Course of Instruction

The course of instruction in the School of Law is intended to equip the student for the practice of his profession. Instruction is offered in the various branches of the common law, of equity, of the statute law of Maryland, and of the statute and public law of the United States. The course of study is designed to give the student a broad view of the origin, development, and function of law, together with a thorough practical knowledge of its principles and their application. Analytical study is made of the principles of substantive and procedural law, and a carefully directed practice court enables the student to get an intimate working knowledge of procedure.

Special attention is given to the statutes in force in Maryland, and to any peculiarities of the law in that State, where there are such. All of the subjects upon which the applicant for the Bar in Maryland is examined are included in the curriculum. But the curriculum includes all of the more important branches of public and private law, and will prepare the student adequately for admission to the Bar of other States.

Admission

The requirements for admission are those of the Association of American Law Schools. Applicants for admission as candidates for a degree are required to produce evidence of the completion of at least one-half the work acceptable for a Bachelor's degree granted on the basis of a four-year period of study by the State University of the State in which the pre-law work is taken, or other standard college or university in such State. Not more than 10 per cent of the credit presented for admission may include credit earned in non-theory courses in military science, hygiene, domestic arts, physical education, vocal or instrumental music, or other courses without intellectual content of substantial value. Such pre-legal work must have been done in residence and must have been passed with a scholastic average at least equal to the average required for graduation in the institution attended.

In compliance with the rules of the Association of American Law Schools, a limited number of special students, not exceeding 10 per cent of the average number of students admitted as beginning regular law students during the two preceding years, applying for admission with less than the academic credit required of candidates for the law degree, may be admitted as candidates for the certificate of the school, but not for the degree, where, in the opinion of the Faculty Council, special circumstances, such as the maturity and apparent ability of the student, seem to justify a deviation from the rule requiring at least two years of college work. Such applicants must be at least twenty-three years of age and specially equipped by training and experience for the study of law.

Requirements for Graduation

The degree of Bachelor of Laws (or in the case of a Special Student, the certificate of proficiency in law) will be conferred upon a candidate who has successfully completed courses totalling at least 80 semester hours, in at least three-fourths of which he must have received a grade of C or higher; a candidate who has failed in not more than one subject will be be recommended for graduation if his general weighted average including such failure is at least 2.0 (C). A candidate with a general weighted average in all his work of not less than 3.15 will be recommended for graduation with honor. A candidate standing in the first tenth of the graduating class and with a general weighted average in all his work of not less than 3.25 is eligible for election to the Order of the Coif, the national law-school honor society.

Combined Program of Study Leading to the Degree of Bachelor of Arts and Bachelor of Laws

The University offers a combined program in liberal arts and law, leading to the degrees of Bachelor of Arts and Bachelor of Laws.

Students enrolled in this combined program spend the first three years of their course in the College of Arts and Sciences at College Park. For the fourth year they register in the School of Law, and upon the successful completion of the work of the first year in the Day School, or the equivalent work of the Evening School, are awarded the degree of Bachelor of Arts. The degree of Bachelor of Laws is awarded upon the successful completion of the work prescribed for graduation in the School of Law. For detailed information as to this combined course, see Section II, College of Arts and Sciences.

Combined Program of Study Leading to the Degrees of Bachelor of Science and Bachelor of Laws

The University also offers a combined program in business and public administration and law leading to the degrees of Bachelor of Science and Bachelor of Laws.

Students pursuing this combined program are required to spend the first three years in the College of Business and Public Administration at College Park. For the fourth year they will register in the School of Law, and upon the successful completion of the work of the first year in the Day School, or the equivalent thereof in the Evening School, are awarded the degree of Bachelor of Science. The degree of Bachelor of Laws is awarded upon the completion of the work prescribed for graduation in the School of Law.

For detailed information as to this combined course, see Section II, College of Business and Public Administration.

Admission to Advanced Standing

Students complying with the requirements for admission to the school who have, in addition, successfully pursued the study of law elsewhere in a law school which is either a member of the Association of American Law Schools or approved by the American Bar Association, may, in the discretion of the Faculty Council, upon presentation of a certificate from such law school showing an honorable dismissal therefrom, and the successful completion of equivalent courses therein, covering at least as many hours as are required for such subjects in this school, receive credit for such courses and be admitted to advanced standing. No student transferring from another law school will be admitted unless eligible to return to the school from which he transfers. No degree will be conferred until after one year of residence and study at the University of Maryland School of Law.

Fees and Expenses

	Maryland Residents	Non-Residents
Tuition Fee, per semester:		
Day School	$100.00	$125.00
Evening School	75.00	100.00
Other Fees: (Payable only once)		
Registration fee, to accompany application	2.00	2.00
Matriculation fee, payable on first registration	10.00	10.00
Diploma fee, payable just before graduation	15.00	15.00

NOTE: The tuition fee is payable in full at the time of registration for each semester.

The School of Law publishes a special catalogue, and a copy of this, or any further information desired, may be secured from: Dean, School of Law, University of Maryland, Redwood and Greene Streets, Baltimore 1, Maryland.

SCHOOL OF MEDICINE

Rob't. U. Patterson, M.D., C.M., LL.D., *Dean*
H. Boyd Wylie, M.D., *Assistant Dean*

William R. Amberson
Franklin B. Anderson
Rubert S. Anderson
Thomas B. Aycock
Walter A. Baetjer
Charles Bagley, Jr.
Harvey G. Beck
J. McFarland Bergland
Charles F. Blake
Otto C. Brantigan
Howard M. Bubert
T. Nelson Carey
C. Jelleff Carr
Thomas R. Chambers
Carl Dame Clarke
Ross McC. Chapman
Clyde A. Clapp
Paul W. Clough
Richard G. Coblentz
Beverly C. Compton
Albertus Cotton
Carl L. Davis
Louis H. Douglass
Charles F. Dye
C. Reid Edwards
William E. Evans
Frank H. J. Figge
Leon Freedom
Edgar B. Friedenwald
Thomas K. Galvin
Moses Gellman
Andrew C. Gillis
D. James Greiner
Frank W. Hachtel
O. G. Harne
Cyrus F. Horine
J. Mason Hundley, Jr.
Elliott H. Hutchins
Edward S. Johnson
F. L. Jennings
C. Loring Joslin
Hugh W. Josephs
Chas. C. W. Judd
Walter L. Kilby
Edward A. Kitlowski
John C. Krantz, Jr.
Louis A. M. Krause
Kenneth D. Legge
R. W. Locher
G. Carroll Lockard
Edward A. Looper
William Love, Jr.
John F. Lutz
Howard J. Maldeis
N. Clyde Marvel
Charles W. Maxson
James C. McAlpine
Sydney R. Miller
Zachariah Morgan
Theodore H. Morrison
Emil Novak
Thomas R. O'Rourk
Robert Oster
C. W. Peake
D. J. Pessagno
H. R. Peters
Maurice C. Pincoffs
J. G. M. Reese
Charles A. Reifschneider
Compton Riely
Harry M. Robinson
Harry L. Rogers
Milton S. Sacks
Emil G. Schmidt
Arthur M. Shipley
Dietrich C. Smith
R. Dale Smith
William H. Smith
Irving J. Spear
Hugh R. Spencer
Thomas P. Sprunt
W. Houston Toulson
Ralph P. Truitt
Eduard Uhlenhuth

Henry F. Ullrich
Allen F. Voshell
Grant E. Ward
C. Gardner Warner
Glenn S. Weiland
Huntington Williams
Walter D. Wise
Thomas C. Wolff
Robert B. Wright
George H. Yaeger
Waitman F. Zinn

Professors

William R. Amberson, Ph.D., Professor of Physiology
Thomas B. Aycock, B.S., M.D., Professor of Clinical Surgery
Charles Bagley, Jr., M.A., M.D., Professor of Neurological Surgery
Harvey G. Beck, M.D., D.Sc., Professor of Clinical Medicine
Charles F. Blake, M.A., M.D., Professor of Diseases of the Rectum and Colon
Otto C. Brantigan, B.S., M.D., Professor of Surgical Anatomy, Associate Professor of Surgery
Ross McC. Chapman, M.D., Professor of Psychiatry
Clyde A. Clapp, M.D., Professor of Ophthalmology
Richard G. Coblentz, M.A., M.D., Clinical Professor of Neurological Surgery
Albertus Cotton, M.A., M.D., Professor of Orthopaedic Surgery and Roentgenology
Carl L. Davis, M.D., Professor of Anatomy
Brice M. Dorsey, D.D.S., Professor of Oral Surgery
Louis H. Douglass, M.D., Professor of Obstetrics
Page Edmunds, M.D., Professor of Traumatic Surgery
Charles Reid Edwards, M.D., Professor of Surgery
Monte Edwards, M.D., Clinical Professor of Surgery and of Diseases of the Rectum and Colon
H. K. Fleck, M.D., Clinical Professor of Ophthalmology
Edgar B. Friedenwald, M.D., Professor of Clinical Pediatrics
Thomas K. Galvin, M.D., Clinical Professor of Gynecology
Joseph E. Gichner, M.D., Professor of Clinical Medicine and Physical Therapeutics
Andrew C. Gillis, M.A., M.D., LL.D., Professor of Neurology
Frank W. Hachtel, M.D., Professor of Bacteriology
J. Mason Hundley, Jr., M.A., M.D., Professor of Gynecology
Elliott H. Hutchins, M.A., M.D., Professor of Surgery
F. L. Jennings, M.D., Professor of Clinical Surgery
C. Loring Joslin, M.D., Professor of Pediatrics
Walter L. Kilby, M.D., Acting Professor of Roentgenology
Edward A. Kitlowski, A.B., M.D., Clinical Professor of Plastic Surgery
John C. Krantz, Jr., Ph.D., D.Sc., Professor of Pharmacology
Kenneth D. Legge, M.D., Professor of Clinical Genito-Urinary Surgery
G. Carroll Lockard, M.D., Professor of Clinical Medicine

Edward A. Looper, M.D., D.Oph., Professor of Rhinology and Laryngology

Frederick B. Mandeville, M.D., Professor of Clinical Surgery

Theodore H. Morrison, M.D., Clinical Professor of Gastro-Enterology

Thomas R. O'Rourk, M.D., Clinical Professor of Otology, Associate in Rhinology and Laryngology

D. J. Pessagno, A.B., M.D., Professor of Clinical Surgery

H. Raymond Peters, A.B., M.D., Professor of Clinical Medicine

Maurice C. Pincoffs, B.S., M.D., Professor of Medicine

Charles A. Reifschneider, M.D., Clinical Professor of Traumatic Surgery and Oral Surgery

Compton Riely, M.D., Clinical Professor of Orthopaedic Surgery

Harry M. Robinson, Sr., M.D., Professor of Dermatology

Arthur M. Shipley, M.D., D.Sc., Professor of Surgery

Irving J. Spear, M.D., Professor of Neurology

Hugh R. Spencer, M.D., Professor of Pathology

Thomas P. Sprunt, A.B., M.D., Acting Head of the Department of Medicine and Professor of Clinical Medicine

W. Houston Toulson, M.Sc., M.D., Professor of Genito-Urinary Surgery

Eduard Uhlenhuth, Ph.D., Professor of Anatomy

Allen Fiske Voshell, A.B., M.D., Professor of Orthopaedic Surgery

Huntington Williams, M.D., Dr. P.H., Professor of Hygiene and Public Health

Walter D. Wise, M.D., Professor of Surgery

H. Boyd Wylie, M.D., Professor of Biological Chemistry and Assistant Dean

Waitman F. Zinn, M.D., Clinical Professor of Rhinology and Laryngology

Associate Professors

Franklin B. Anderson, M.D., Associate Professor of Rhinology and Laryngology, and Otology

Walter A. Baetjer, A.B., M.D., Associate Professor of Medicine

J. McFarland Bergland, B.S., M.D., Associate Professor of Obstetrics

T. Nelson Carey, M.D., Associate Professor of Medicine and Physician in Charge of Medical Care of Students

C. Jelleff Carr,, Ph.D., Associate Professor of Pharmacology

Thomas R. Chambers, A.B., M.D., Associate Professor of Surgery

Carl Dame Clarke, M.A., Associate Professor of Art as Applied to Medicine

Paul W. Clough, B.S., M.D., Associate Professor of Medicine

William Ellsworth Evans, Jr., Ph.D., Associate Professor of Pharmacology

Frank H. J. Figge, Ph.D., Associate Professor of Gross Anatomy

LEON FREEDOM, M.D., Associate Professor of Neurology and Instructor in Pathology

MOSES GELLMAN, B.S., M.D., Associate Professor of Orthopaedic Surgery

T. CAMPBELL GOODWIN, M.S., M.D., Associate Professor of Pediatrics

WILLIAM E. HAHN, D.D.S., Associate Professor of Oral Surgery

O. G. HARNE, Associate Professor of Histology

CYRUS F. HORINE, M.D., Associate Professor of Surgery

EDWARD S. JOHNSON, M.D., Associate Professor of Surgery

HUGH W. JOSEPHS, M.D., Associate Professor of Pediatrics

CHARLES C. W. JUDD, M.D., Associate Professor of Medicine

VERNON D. KAUFMAN, D.D.S., Associate Professor of Oral Surgery

LOUIS A. M. KRAUSE, M.D., Associate Professor of Medicine

R. W. LOCHER, M.D., Associate Professor of Clinical Surgery

WILLIAM S. LOVE, JR., A.B., M.D., Associate Professor of Medicine and Instructor in Pathology

HOWARD J. MALDEIS, M.D., Associate Professor of Legal Medicine and Associate in Pathology

N. CLYDE MARVEL, A.B., M.D., Associate Professor of Surgery

CHARLES W. MAXSON, M.D., Associate Professor of Surgery

SYDNEY R. MILLER, B.S., M.D., Associate Professor of Medicine

JAMES G. MCALPINE, Ph.D., Associate Professor of Bacteriology

EMIL NOVAK, A.B., M.D., D.Sc., Associate Professor of Obstetrics

ROBERT H. OSTER, Ph.D., Associate Professor of Physiology

C. W. PEAKE, M.D., Associate Professor of Surgery

J. G. M. REESE, M.D., Associate Professor of Obstetrics

HARRY L. ROGERS, M.D., Associate Professor of Orthopaedic Surgery

EMIL G. SCHMIDT, Ph.D., LL.B., Associate Professor of Biological Chemistry

DIETRICH CONRAD SMITH, Ph.D., Associate Professor of Physiology

WILLIAM H. SMITH, M.D., Associate Professor of Clinical Medicine

RALPH P. TRUITT, M.D., Associate Professor of Psychiatry

HENRY F. ULLRICH, M.D., D.Sc., Associate Professor of Orthopaedic Surgery

GRANT E. WARD, A.B., M.D., Associate Professor of Surgery and Oral Surgery

C. GARDNER WARNER, A.B., M.D., Associate Professor of Pathology

ROBERT B. WRIGHT, B.S., M.D., Associate Professor of Pathology

LAWRENCE F. WOLLEY, M.D., Associate Professor of Psychiatry

GEORGE H. YAEGER, B.S., M.D., Associate Professor of Surgery

Assistant Professors

THURSTON R. ADAMS, M.D., Assistant Professor of Surgery, Associate in Diseases of the Rectum and Colon

RUBERT S. ANDERSON, Ph.D., Assistant Professor of Physiology

H. F. BONGART, M.D., Assistant Professor of Surgery

J. EDMUND BRADLEY, B.S., M.D., Assistant Professor of Pediatrics

Leo Brady, A.B., M.D., Assistant Professor of Gynecology
Simon H. Brager, M.D., Assistant Professor of Surgery
H. M. Bubert, M.D., Assistant Professor of Medicine
Murray M. Copeland, M.D., Assistant Professor of Surgery
Charles N. Davidson, M.D., Assistant Professor in Roentgenology
Ross Davies, M.D., M.P.H., Assistant Professor of Hygiene and Public Health
J. S. Eastland, A.B., M.D., Assistant Professor of Medicine
Francis A. Ellis, A.B., M.D., Assistant Professor of Dermatology
Maurice Feldman, M.D., Assistant Professor of Gastro-Enterology
A. H. Finkelstein, M.D., Assistant Professor of Pediatrics
Harry Goldsmith, M.D., Assistant Professor of Psychiatry
Henry F. Graff, A.B., M.D., Assistant Professor of Ophthalmology
D. James Greiner, B.S., M.D., Assistant Professor of Pathology
Lewis P. Gundry, A.B., M.D., Assistant Professor of Medicine
Harry C. Hull, M.D., Assistant Professor of Surgery
Albert Jaffe, M.D., Assistant Professor of Pediatrics
John E. Legge, M.D., Assistant Professor of Medicine
John F. Lutz, A.B., M.D., Assistant Professor of Histology
Walter C. Merkel, A.B., M.D., Assistant Professor of Pathology
Zachariah Morgan, M.D., Assistant Professor of Gastro-Enterology
Samuel Morrison, A.B., M.D., Assistant Professor of Gastro-Enterology
Harry M. Murdock, B.S., M.D., Assistant Professor of Psychiatry
George McLean, M.D., Assistant Professor of Medicine
James W. Nelson, M.D., Assistant Professor of Surgery
H. W. Newell, M.D., Assistant Professor of Psychiatry
M. Alexander Novey, A.B., M. D., Assistant Professor of Obstetrics
Benjamin Pushkin, M.D., Assistant Professor of Neurology
I. O. Ridgely, M.S., M.D., Assistant Professor of Surgery
Harry M. Robinson, Jr., B.S., M.D., Assistant Professor of Dermatology, Assistant in Medicine
Milton S. Sacks, B.S., M.D., Assistant Professor of Medicine and Head of Clinical Pathology
Richard T. Shackelford, A.B., M. D., Assistant Professor of Surgery
Isadore A. Siegel, A.B., M.D., Assistant Professor of Obstetrics
Edward P. Smith, M.D., Ph.G., Assistant Professor of Gynecology
Frederick B. Smith, M.D., Assistant Professor of Pediatrics
George A. Strauss, Jr., M.D., Assistant Professor of Gynecology
John H. Traband, M.D., Assistant Professor of Pediatrics
I. Ridgeway Trimble, M.D., Assistant Professory of Surgery
William H. F. Warthen, A.B., M.D., Assistant Professor of Hygiene and Public Health
Glenn S. Weiland, Ph.D., Assistant Professor of Biological Chemistry
J. Herbert Wilkerson, M.D., Assistant Professor of Oral Surgery
Thomas C. Wolff, Litt.B., M.D., C.M., Assistant Professor of Medicine

Associates

JAMES G. ARNOLD, JR., M.D., Associate in Neurological Surgery
MARGARET B. BALLARD, M.D., Associate in Obstetrics
DUDLEY P. BOWE, A.B., M.D., Associate in Obstetrics
KENNETH B. BOYD, M.D., Associate in Gynecology and Assistant in Obstetrics
BEVERLY C. COMPTOM, A.B., M.D., Associate in Gynecology
W. A. H. COUNCILL, M.D., Associate in Genito-Urinary Surgery
E. EUGENE COVINGTON, M.D., Associate in Surgical Anatomy and Surgery
JOHN C. DUMLER, B.S., M.D., Associate in Gynecology
WILLIAM W. ELGIN, M.D., Associate in Psychiatry
J. J. ERWIN, M.D., Associate in Gynecology
HOUSTON EVERETT, M.D., Associate in Gynecology
L. K. FARGO, M.D., Associate in Genito-Urinary Surgery
WETHERBY FORT, M.D., Associate in Medicine
FRANK J. GERAGHTY, A.B., M.D., Associate in Medicine
FRANCIS W. GILLIS, M.D., Associate in Genito-Urinary Surgery
SAMUEL S. GLICK, M.D., Associate in Pediatrics
ALBERT E. GOLDSTEIN, M.D., Associate in Pathology
RAYMOND F. HELFRICH, A.B., M.D., Associate in Surgery
JOHN T. HIBBITTS, M.D., Associate in Gynecology
JOHN F. HOGAN, M.D., Associate in Genito-Urinary Surgery
Z. VANCE HOOPER, M.D., Associate in Gastro-Enterology
CLEWELL HOWELL, B.S., M.D., Associate in Pediatrics
JOSEPH I. KEMLER, M.D., Associate in Ophthalmology
F. EDWIN KNOWLES, JR., M.D., Associate in Ophthalmology
HARRY V. LANGELUTTIG, A.B., M.D., Associate in Medicine
PHILIP F. LERNER, A.B., M.D., Associate in Neurology
LUTHER E. LITTLE, M.D., Associate in Surgery
HANS W. LOEWALD, M.D., Associate in Psychiatry
G. BOWERS MANSDORFER, B.S., M.D., Associate in Pediatrics
LYLE J. MILLAN, M.D., Associate in Genito-Urinary Surgery
W. RAYMOND MCKENZIE, M.D., Associate in Rhinology and Laryngology
HUGH B. MCNALLY, B.S., M.D., Associate in Obstetrics
FRANK N. OGDEN, M.D., Associate in Biological Chemistry
BENJAMIN S. RICH, A.B., M.D., Associate in Otology and in Rhinology and Laryngology
WILLIAM F. RIENHOFF, JR., M.D., Associate in Surgery
JOHN E. SAVAGE, B.S., M.D., Associate in Obstetrics
WILLIAM M. SEABOLD, A.B., M.D., Associate in Pediatrics
WILLIAM B. SETTLE, M.D., Associate in Surgery, Instructor in Gynecology and Surgical Anatomy.
HARRY S. SHELLEY, B.S., M.D., Associate in Genito-Urinary Surgery
ARTHUR G. SIWINSKI, A.B., M.D., Associate in Surgery
SOL SMITH, M.D., Associate in Medicine

Cleo D. Stiles, M.D., Associate in Rhinology and Laryngology, and Assistant in Otology

E. H. Tonolla, M.D., Associate in Medicine

John A. Wagner, B.S., M.D., Associate in Pathology, Assistant in Medicine

W. Wallace Walker, M.D., Associate in Surgical Anatomy and Surgery

Austin H. Wood, M.D., Associate in Genito-Urinary Surgery

Lecturers

Jonas Friedenwald, M.A., M.D., Lecturer in Ophthalmic Pathology

Charles R. Goldsborough, M.A., M.D., Lecturer in Medicine

Leslie B. Hohman, M.D., Lecturer in Psychiatry

James C. Munch, Ph.D., Lecturer in Elementary Biometrics

Clark H. Yeager, M.D., Dr. P.H., Lecturer in Tropical Medicine

Instructors

Conrad B. Acton, Instructor in Medicine and Assistant in Pathology

Marie A. Andersch, Ph.D., Instructor in Medicine

A. Russell Anderson, M.D., Instructor in Psychiatry

Harry C. Bowie, B.S., M.D., Instructor in Surgery, Assistant in Surgical Anatomy

Thomas S. Bowyer, A.B., M.D., Instructor in Gynecology and Assistant in Obstetrics

George H. Brouillet, B.S., M.D., Instructor in Surgery

Ann Virginia Brown, A.B., Instructor in Biological Chemistry

Henry F. Buettner, M.D., Instructor in Bacteriology

Harold H. Burns, M.D., Instructor in Surgery

M. Paul Byerly, M.D., Instructor in Pediatrics

Lucile J. Caldwell, M.D., Instructor in Dermatology

Ernest I. Cornbrooks, Jr., A.B., M.D., Instructor in Gynecology

Edward F. Cotter, M.D., Instructor in Pathology, Assistant in Neurology

Stuart G. Coughlan, B.S., M.D., Instructor in Surgery

J. G. N. Cushing, M.D., Instructor in Psychiatry

B. Matthew Debuskey, M.D., Instructor in Pediatrics

W. Allen Deckert, A.B., M.D., Instructor in Gynecology and Assistant in Surgery and Obstetrics

S. J. Demarco, M.D., Instructor in Surgery

Francis G. Dickey, A.B., M.D., Instructor in Medicine

William K. Diehl, B.S., M.D., Instructor in Gynecology

D. McClelland Dixon, M.D., Instructor in Obstetrics, Assistant in Pathology

Ernest S. Edlow, A.B., M.D., Instructor in Gynecology

William L. Fearing, M.D., Instructor in Neurology

Jerome Fineman, M.D., Instructor in Pediatrics

Philip D. Flynn, M.D., Instructor in Medicine
Irving Freeman, B.S., M.D., Instructor in Medicine
William M. Garlick, A.B., M.D., Instructor in Surgery
George Govatos, A.B., M.D., Instructor in Surgery
Robert L. Graham, A.B., M.D., Instructor in Pathology
E. M. Hanrahan, A.B., M.D., Instructor in Surgery
Mary L. Hayleck, M.D., Instructor in Pediatrics
William G. Helfrich, B.S., M.D., Instructor in Medicine
Samuel T. Helms, B.S., M.D., Instructor in Medicine and Genito-Urinary Surgery
W. Grafton Hersperger, A.B., M.D., Instructor in Medicine
F. A. Holden, M.D., Instructor in Ophthalmology
Calvin Hyman, M.D., Instructor in Surgery
B. Wallace Inman, D.D.S., Instructor in Oral Surgery
Conrad L. Inman, D.D.S., Instructor in Oral Surgery
Meyer W. Jacobson, M.D., Instructor in Medicine
Joye J. Jennings, A.B., Instructor in Physiology
Joseph V. Jerardi, B.S., M.D., Instructor in Surgery
William R. Johnson, M.D., Instructor in Surgery
Edward S. Kallins, B.S., M.D., Instructor in Medicine
D. Frank Kaltreider, M.D., Instructor in Obstetrics
Clyde F. Karns, B.S., M.D., Instructory in Surgery
Howard F. Kinnamon, M.D., Instructor in Surgery
Lester N. Kolman, M.D., Instructor in Dermatology
Vernon E. Krahl, B.S., M.S., Instructor in Gross Anatomy
A. Kremen, A.B., M.D., Instructor in Ophthalmology
Milton C. Lang, M.D., Instructor in Ophthalmology
Arnold F. Lavenstein. Instructor in Pediatrics
C. Edward Leach, M.D., Instructor in Medicine
Samuel Legum, A.B., M.D., Instructor in Medicine
Philip F. Lerner, A.B., M.D., Instructor in Neurology
H. Edmund Levin, B.S., M.D., Instructor in Medicine and Bacteriology.
Kurt Levy, M.D., Instructor in Medicine.
I. H. Maseritz, M.D., Instructor in Orthopaedic Surgery.
Howard B. Mays, M.D., Instructor in Genito-Urinary Surgery and Assistant in Pathology.
R. B. Mitchell, Jr., B.S., M.D., Instructor in Medicine.
J. Duer Moores, B.S., M.D., Instructor in Surgery.
Frank K. Morris, A.B., M.D., Instructor in Gynecology and Obstetrics.
Ruth Musser, M.S., Instructor in Pharmacology.
John A. Myers, M.E.E., M.D., Instructor in Medicine, Assistant in Gastro-Enterology.
Francis McLaughlin, M.D., Instructor in Psychiatry.
Samuel Novey, M.D., Instructor in Psychiatry.
Herbert E. Reifschneider, A.M., M.D., Instructor in Surgery and Oral Surgery.

Dexter L. Reimann, B.S., M.D., Instructor in Pathology. Assistant in Medicine.
Robert A. Reiter, A.M., M.D., Instructor in Medicine.
Daniel R. Robinson, M.D., Instructor in Surgery.
John F. Schaefer, B.S., M.D., Instructor in Surgery.
Lawrence M. Serra, M.D., Instructor in Medicine.
M. S. Shilling, A.B., M.D., D.Sc., Instructor in Medicine.
Albert J. Shochat, B.S., M.D., Instructor in Gastro-Enterology
Kathryn L. Schultz, M.D., Instructor in Psychiatry.
Benedict Skitarelic, A.B., M.D., Instructor in Pathology, and Assistant in Medicine.
Karl J. Steinmueller, A.B., M.D., Instructor in Surgery.
Harry A. Teitelbaum, B.S., M.D., Instructor in Gross Anatomy, Assistant in Neurology.
David Tenner, M.D., Instructor in Medicine.
Dorsey R. Tipton, D.D.S., Instructor in Oral Surgery.
Myron G. Tull, A.B., M.D., Instructor in Hygiene and Public Health.
Philip S. Wagner, M.D., Instructor in Psychiatry.
Gibson J. Wells, A.B., M.D., Instructor in Pediatrics.
Hugh G. Whitehead, M.D., Instructor in Medicine.
Henry L. Wollenweber, M.D., Instructor in Pathology, Assistant in Pharmacology.

Assistants

J. Warren Albrittain, B.S., M.D., Assistant in Obstetrics.
Leon Ashman, M.D., Assistant in Medicine.
John L. Atkins, A.B., M.D., Assistant in Medicine.
Jones B. Ballina, A.B., M.D., Assistant in Obstetrics.
Donald J. Barnett, M.D., Assistant in Roentgenology.
Nathaniel M. Beck, A.B., M.D., Assistant in Medicine and Gastro-Enterology.
Robert Z. Berry, A.B., M.D., Assistant in Surgery.
Joseph M. Blumberg, B.S., M.D., Assistant in Medicine.
Alma Braun-Kelly, M.D., Assistant in Obstetrics.
Henry A. Briele, M.D., Assistant in Surgery.
A. V. Buchness, A.B., M.D., Assistant in Surgery.
Paul E. Carliner, B.S., M.D., Assistant in Medicine.
L. T. Chance, M.D., Assistant in Surgery.
William S. Cheney, M.D., Assistant in Surgery.
Robert F. Chenowith, M.D., Assistant in Surgery.
Mary E. Chinn, A.B., Assistant in Physiology.
Robert C. Crawford, A.B., M.D., Assistant in Medicine.
Samuel H. Culver, M.D., Assistant in Surgery.
Raymond M. Cunningham, A.B., M.D., Assistant in Surgery.
Dwight M. Currie, A.B., M.D., Assistant in Surgery.
Preston R. Cutler, A.B., M.D., Assistant in Surgery.

Daniel I. Dann, M.D., Assistant in Obstetrics.
Edwin O. Daue, Jr., B.S., M.D., Assistant in Medicine.
Nachman Davidson, A.B., M.D., Assistant in Medicine.
George H. Davis, M.D., Assistant in Obstetrics.
John R. Davis, M.D., Assistant in Medicine.
Everett S. Diggs, B.S., M.D., Assistant in Gynecology.
Charles H. Doeller, Jr., A.B., M.D., Assistant in Obstetrics.
H. C. Donahoo, Jr., M.D., Assistant in Obstetrics.
Morris A. Fine, M.D., Assistant in Medicine and Genito-Urinary Surgery.
Herbert M. Foster, M.D., Assistant in Surgery.
Samuel L. Fox, M.D., Assistant in Rhinology and Laryngology.
Audrey M. Funk, A.B., Assistant in Medicine.
L. Calvin Gareis, B.S., M.D., Assistant in Obstetrics.
Jason H. Gaskell, M.D., Assistant in Orthopaedic Surgery.
William R. Geraghty, B.S., M.D., Assistant in Surgery.
Walter H. Gerwig, Jr., M.D., Assistant in Surgery.
Robert L. Gibbs, A.B., M.D., Assistant in Medicine.
Marion H. Gillis, M.D., Assistant in Ophthalmology.
Robert J. Gore, M.D., Assistant in Pediatrics.
H. L. Granoff, A.B., M.D., Assistant in Gynecology.
William H. Grenzer, M.D., Assistant in Medicine.
Joseph B. Gross, B.S., M.D., Assistant in Medicine.
Donald B. Grove, M.D., Assistant in Surgery.
Georg K. Gulck, M.D., Assistant in Pharmacology
Samuel J. Hankin, M.D., Assistant in Medicine.
Oscar Hartman, B.S., M.D., Assistant in Obstetrics.
John S. Haught, M.D., Assistant in Gynecology.
Robert F. Healy, M.D., Assistant in Surgery.
Thomas A. Hedrick, M.D., Assistant in Pediatrics.
L. Ann Hellen, B.S., Assistant in Medicine.
James W. Hendrick, M.D., Assistant in Surgery.
Benjamin Highstein, M.D., Assistant in Dermatology.
John H. Hirschfeld, M.D., Assistant in Rhinology and Laryngology.
Mark Hollander, M.D., Assistant in Dermatology.
John V. Hopkins, M.D., Assistant in Orthopaedic Surgery.
Rollin C. Hudson, M.D., Assistant in Dermatology.
Jaroslav Hulla, M.D., Assistant in Obstetrics.
William C. Humphries, M.D., Assistant in Rhinology and Laryngology.
Oliver A. James, M.D., Assistant in Surgery.
Jacob R. Jensen, B.S., M.D., Assistant in Obstetrics.
Hugh Jewett, M.D., Assistant in Genito-Urinary Surgery.
Ferd E. Kadan, A.B., M.D., Assistant in Obstetrics.
William H. Kammer, Jr., A.B., M.D., Assistant in Medicine.
Melvin D. Kappelman, B.S., M.D., Assistant in Obstetrics.
Arthur Karfgin, B.S., M.D., Assistant in Medicine.

James R. Karns, B.S., M.D., Assistant in Medicine.
Lawrence Katzenstein, M.D., Assistant in Medicine.
Fayne A. Kayser, M.D., Assistant in Rhinology and Laryngology.
Lauriston L. Keown, A.B., M.D., Assistant in Pediatrics
Charles W. Knerler, M.D., Assistant in Medicine.
Schuyler G. Kohn, B.S., M.D., Assistant in Obstetrics.
Louis J. Kroll, A.B., M.D., Assistant in Medicine.
Frederick T. Kyper, M.D., D.Sc., Assistant in Rhinology and Laryngology.
Alfred S. Lederman, Assistant in Gastro-Enterology.
F. Ford Loker, B.S., M.D., Assistant in Surgery.
Ephraim T. Lisansky, A.B., M.D., Assistant in Pathology and Medicine.
William B. Long, Jr., B.S., M.D., Assistant in Orthopaedic Surgery and Surgery.
William C. Lowe, B.S., M.D., Assistant in Medicine.
H. Pearce Maccubbin, B.S., M.D., Assistant in Medicine.
John W. Machen, M.D., Assistant in Neurology.
Ernest W. Mack, M.D., Assistant in Surgery.
Helen I. Maginnis, M.D., Assistant in Gynecology.
W. Kenneth Mansfield, Jr., M.D., Assistant in Obstetrics.
A. Robert Marks, A.B., M.D., Assistant in Pediatrics.
Maxwell L. Mazer, M.D., Assistant in Obstetrics.
Robert B. Mearns, M.D., Assistant in Medicine.
Karl F. Mech, B.S., M.D., Assistant in Pathology.
George C. Medairy, M.D., Assistant in Neurology.
Israel P. Meranski, B.S., M.D., Assistant in Pediatrics.
William A. Mitchell, M.D., Assistant in Obstetrics.
John H. Morrison, B.S., M.D., Assistant in Obstetrics.
S. Edwin Muller, M.D., Assistant in Medicine.
Joseph E. Muse, Jr., B.S., M.D., Assistant in Medicine.
Howard B. McElwain, M.D., Assistant in Surgery.
William W. McKinney, M.D., Assistant in Neurological Surgery.
Samuel McLanahan, Jr., A.B., M.D., Assistant in Surgery.
J. Edward Norris, M.D., Assistant in Obstetrics.
Richard S. Owens, M.D., Assistant in Otology.
Margaret Virginia Palmer, A.M., M.D., Assistant in Medicine.
William A. Parr, M.D., Assistant in Otology.
Patrick C. Phelan, Jr., A.B., M.D., Assistant in Surgery.
Leslie Harrell Pierce, B.S., M.D., Assistant in Medicine.
Samuel E. Proctor, A.B., M.D., Assistant in Surgery.
J. Emmett Queen, A.B., M.D., Assistant in Medicine.
Samuel T. R. Revell, B.S., M.D., Assistant in Medicine
Henry L. Rigdon, M.D., Assistant in Surgery.
Donald J. Roop, M.D., Assistant in Medicine.
Clarence P. Scarborough, M.D., Assistant in Surgery.
W. J. Schmitz, M.D., Assistant in Pediatrics.

Theodore A. Schwartz, M.D., Assistant in Rhinology and Laryngology.
Earle S. Scott, M.D., Assistant in Pediatrics.
J. King B. E. Seegar, Jr., A.B., M.D., Assistant in Obstetrics.
Robert C. Sheppard, M.D., Assistant in Surgery.
E. Roderick Shipley, A.B., M.D., Assistant in Surgery.
George Silverton, A.B., M.D., Assistant in Medicine.
Jerome Snyder, B.S., M.D., Assistant in Ophthalmology.
Samuel Snyder, M.D., Assistant in Medicine.
Solomon Tanenbaum, M.D., Assistant in Dermatology.
T. J. Touhey, M.D., Assistant in Surgery.
Wilfred H. Townshend, Jr., A.B., M.D., Assistant in Medicine.
W. H. Triplett, M.D., Assistant in Medicine.
Hugh H. Trout, Jr., M.D., Assistant in Surgery.
Frederick W. Waknitz, M.D., Assistant in Surgery.
William K. Waller, A.B., M.D., Assistant in Medicine.
William Earl Weeks, M.D., Assistant in Pediatrics.
J. Carlton Wich, B.S., M.D., Assistant in Pediatrics.
Milton J. Wilder, M.D., Assistant in Orthopaedic Surgery.
Albert R. Wilkerson, M.D., Assistant in Surgery.
Daniel Wilfson, Jr., A.B., M.D., Assistant in Medicine.

Fellows

Virginia M. Auld, A.B., Emerson Fellow in Pharmacology.
Frederick K. Bell, Ph.D., U. S. Pharmacopoeia Fellow.
deCamp B. Farson, A.B., Emerson Fellow in Pharmacology.
Alvin H. Honigman, B.S., M.D., Weaver Fellow in Pathology.
Helen A. Horn, A.B., M.D., Weaver Fellow in Pathology.
Harry K. Ivamota, Ph.D., Emerson Fellow in Pharmacology.
Dorothy K. Shipley, M.S., Fellow in Pharmacology.
Wilfred H. Townshend, Jr., A.B., M.D., Hitchcock Fellow in Medicine.
John A. Wagner, B.S., M.D., Hitchcock Fellow in Neurological Surgery.
Sylvia L. Pollack, B.S., Weaver Fellow in Physiology.

History

The School of Medicine of the University of Maryland, organized in 1807, is one of the oldest foundations for medical education in America, ranking fifth in point of age among the medical colleges of the United States. In the school building at Lombard and Greene Streets in Baltimore was founded one of the first medical libraries, and the first medical college library in the United States.

At this Medical School for the first time in America, dissection was made a compulsory part of the curriculum, and independent chairs for the teaching of gynecology and pediatrics (1867), and of ophthalmology and otology (1873), were installed.

This School of Medicine was one of the first to provide for adequate clinical instruction by the erection in 1823 of its own hospital.

The Baltimore Medical College was taken over by the University of Maryland School of Medicine in 1913, and the College of Physicians and Surgeons in 1915.

Clinical Facilities

The original University Hospital, located on the corner of Greene and Lombard Streets, is the oldest institution for the care of the sick in Maryland. It was opened in September 1823, and at that time consisted of four wards, one of which was reserved entirely for patients suffering from ophthalmological conditions. That building is now used as the outpatient department of the modern University Hospital located at the corner of Greene and Redwood Streets, which opened its wards for the reception of patients on November 12, 1934. In addition to this hospital, the School of Medicine also has control of clinical teaching facilities at the Mercy Hospital, and the Baltimore City Hospitals, both of which treat many thousands of patients annually. It also utilizes the facilities of the James Lawrence Kernan Hospital for Crippled Children, and the Sydenham Hospital for the treatment of contagious diseases. Special clinics in psychiatry are held at the Sheppard and Enoch Pratt and the Spring Grove Hospitals. In addition to the regular obstetrical service in the University Hospital, an active outpatient or home delivery service is conducted by the Medical School. The University Hospital provides 435 beds and 50 bassinets for all classes of patients, except mental diseases, contagious diseases, and tuberculosis. A wealth of clinical material is available for the instruction of students. The University Hospital also conducts a School of Nursing which has been in existence since 1889.

Outpatient Department and Laboratories

The outpatient department clinics associated with the University Hospital and the Mercy Hospital are organized on a uniform plan in order that teaching may be adequate in each. Each dispensary has departments of medicine, surgery, oncology, ophthalmology and otology, genito-urinary, gynecology, gastro-enterology, oral surgery, cardiology, pediatrics, neurology, orthopedics, proctology, psychiatry, dermatology, laryngology and rhinology, and tuberculosis. During the junior year for one-third of the time students attend the departments of medicine and surgery in the Outpatient Department. In the senior year, all students work one hour each day in the special departments of the Outpatient Department. This gives an idea of the value of these dispensaries for clinical teaching.

Student laboratories conducted by the School of Medicine for medical instruction are as follows: Gross Anatomy, Histology and Embryology, Physiology, Bacteriology and Immunology, Biological Chemistry, Pharmacology, Pathology, Clinical Pathology, Operative Surgery and Surgical Anatomy.

Prizes and Scholarships

The following prizes and scholarships are offered in the School of Medicine. (For details see School of Medicine Bulletin.)

The Faculty Prize: The Dr. A. Bradley Gaither Memorial Prize; The Dr. Samuel Leon Frank Scholarship; The Charles M. Hitchcock Scholarships; The Randolph Winslow Scholarship; The Dr. Leo Karlinsky Memorial Scholarship; The University Scholarship; The Frederica Gehrmann Scholarship; The Clarence and Genevra Warfield Scholarships; The Israel and Cecelia E. Cohen Scholarship; The Dr. Horace Bruce Hetrick Scholarship; The Henry Rolando Scholarship; and The Real Scholarships.

Admission to First Year Class

All applications for admission must be submitted on forms which may be secured from the Chairman of the Committee on Admissions, School of Medicine, University of Maryland, Baltimore 1, Maryland.

During the war period the school was operated upon an accelerated schedule of study, and students accomplished four years' accelerated work in three calendar years. The next session of the Medical School will begin September 3, 1946, and the regular four-year unaccelerated schedule of instruction will be put into operation.

Admission to Advanced Standing

Students who have attended approved medical schools are eligible to file applications for admission as advanced students in the second- and third-year classes. Such applicants must be prepared to meet the current first-year entrance requirements, in addition to presenting an acceptable medical school scholastic record, including courses which are quantitatively and qualitatively equivalent to similar courses in this school.

Application for advanced standing is made in accordance with the instructions accompanying the application form.

Minimum Requirements for Admission

The minimum requirements for admission to the School of Medicine are:

(a) Graduation from an approved secondary school, or the equivalent in entrance examinations, and

(b) Three calendar years of acceptable premedical credit earned in an *approved* college of arts and sciences. The quantity and quality of this preprofessional course of study shall be not less than that required for recommendation by the institution where the premedical courses are being, or have been, studied.

The premedical curriculum shall include basic courses in English, Biology, Inorganic Chemistry, Organic Chemistry, Physics, French or German, and such elective courses as will complete a balanced three-year schedule of study.

The elective courses should be selected from the following three groups:

Humanities

English (an advanced course in English composition should be taken, if possible)
Scientific German or French (a reading knowledge of either language is desirable, although German is preferred)
Philosophy

Natural Sciences

Comparative Vertebrate Anatomy
Embryology
Physical Chemistry or Quantitative Analysis
Mathematics

Social Sciences

Economics
History
Political Science
Psychology (a basic course should be taken)
Sociology, etc.

For admission to the premedical curriculum, the requirements are the same as for the freshman class in the College of Arts and Sciences, with the prescribed addition of two years of one foreign language.

Careful attention should be given to the selection of elective courses in the natural sciences. Accordingly, it is suggested that the elective list given above be a guide in this connection and that the remainder of the college credits be accumulated from courses designed to promote a broad cultural development. Students should avoid the inclusion of college courses in subjects that occur in the medical curriculum; for example, histology, histological technique, human anatomy, bacteriology, physiology, neurology, physiological chemistry.

It is not intended that these suggestions be interpreted to restrict the education of students who exhibit an aptitude for the natural sciences or to limit the development of students who plan to follow research work in the field of medicine.

In accepting candidates for admission, preference will be given to those applicants who have acceptable scholastic records in secondary school and college, satisfactory scores in the Medical Aptitude Test, favorable letters of recommendation from their premedical committees, or from one instructor in each of the departments of biology, chemistry, and physics, and who in all other respects give every promise of becoming successful students and physicians of high standing.

Those candidates for admission who are accepted will receive certificates of entrance from the Director of Admissions of the University.

Fees and Expenses

The tuition fee for residents of Maryland is $225 per semester and for non-residents $300 per semester. In addition, there are a number of miscellaneous fees, such as those for laboratory, student health service, students' activities, maintenance, and service, etc. A complete schedule of all fees will be found in the Bulletin of the School of Medicine, a copy of which may be obtained from the Committee on Admissions.

Personal expenses, such as board and lodging, books, laundry, etc., naturally depend to a large extent on the financial condition and resourcefulness of the individual student. They range from $400 to $750 per year, the average being about $600.

In addition to the above expenses, each student must provide himself with a suitable microscope.

Advice to Premedical Students

Students registered in the premedical courses should secure a copy of the latest catalogue of the School of Medicine early in their first year in college in order to acquaint themselves with the requirements for admission. A copy of this bulletin may be obtained by writing to the Committee on Admissions, School of Medicine, University of Maryland, Lombard and Greene Streets, Baltimore 1, Maryland.

Anne Arundel Hall
One of the Women's Dormitories at College Park

SCHOOL OF PHARMACY

A. G. DuMez, *Dean*
Miss B. Olive Cole, *Secretary*

The Faculty Council

Walter H. Hartung, B.S., Ph.D.
Clifford W. Chapman, B.A., M.Sc., Ph.D.
J. Carlton Wolf, B.Sc., Phar.D.
B. Olive Cole, Phar.D., LL.B.
H. E. Wich, Phar.D.
Donald E. Shay, B.S., M.S., Ph.D.
A. W. Richeson, B.S., A.M., Ph.D.
Frank J. Slama, B.S., M.S., Ph.D.

Faculty

Clifford W. Chapman, B.A., M.Sc., Ph.D., Emerson Professor of Pharmacology.
Andrew G. DuMez, Ph.G., B.S., M.S., Ph.D., Professor of Pharmacy.
Walter H. Hartung, B.A., Ph.D., Professor of Pharmaceutical Chemistry.
J. Carlton Wolf, Phar.D., Sc.D., Professor of Dispensing Pharmacy.
B. Olive Cole, Phar.D., LL.B., Associate Professor of Economics and Pharmaceutical Law.
Norman E. Phillips, B.S., Ph.D., Associate Professor of Zoology.
A. W. Richeson, B.S., A.M., Ph.D., Associate Professor of Mathematics.
Donald E. Shay, B.S., M.S., Ph.D., Associate Professor of Bacteriology.
Frank J. Slama, Ph.G., Ph.C., B.S., M.S., Ph.D., Associate Professor of Botany and Pharmacognosy.
Henry E. Wich, Phar.D., Associate Professor of Inorganic and Analytical Chemistry.
Adele B. Ballman, A.B., Ph.D., Assistant Professor of English.
Gaylord B. Estabrook, B.S., M.S., Ph.D., Assistant Professor of Physics and Physical Chemistry.
George Philip Hager, Jr., B.S., M.S., Ph.D., Assistant Professor of Inorganic and Organic Chemistry.
Benjamin Frank Allen, B.S., Instructor in Pharmacy.
Georgiana S. Gittinger, A.B., M.A., Instructor in Physiological Chemistry.
Norbert G. Lassahn, B.S., Instructor in Pharmacy (Hospital).
Robert Anthony Littleford, B.S., M.S., Ph.D., Instructor in Zoology.
Morton Abarbanel, B.S., Assistant in Pharmacy (Hospital).
Jane Louise Banker, B.A., Assistant in Chemistry.
Melba Agnes Grafius, B.S., Assistant in Pharmacy (Hospital.)
James O. Hoppe, B.S., M.S., Assistant in Pharmacology.
Joseph Paul LaRocca, B.S., M.S., Assistant in Pharmacy.
Luis Beltran Monzon, Chem.Phar., Assistant in Pharmacology.

History

The School of Pharmacy of the University of Maryland, formerly the Maryland College of Pharmacy, was organized on July 20, 1840, by a forward-looking group of apothecaries and physicians then practicing in the State of Maryland, who recognized the necessity for more thoroughly educated and better-trained pharmacists if this rapidly growing phase of medical service was to be properly developed. It was incorporated on January 27, 1841, and the first course of lectures was begun in November of the same year. The College continued to operate as an independent institution until 1904, when it was amalgamated with the group of professional schools in Baltimore then known as the University of Maryland. It became a department of the State University when the old University of Maryland was merged with the Maryland State College in 1920. With but one short intermission just prior to 1856 it has continuously exercised its functions as a teaching institution.

Location

The School of Pharmacy is located at 32 South Greene Street, in close proximity to the Schools of Medicine, Law and Dentistry.

Aims

The School of Pharmacy provides systematic instruction in pharmacy, the collateral sciences, and such other subjects as are deemed to be essential in the education of a pharmacist. Its chief aim is to prepare its matriculants for the intelligent practice of dispensing pharmacy, but it also offers the facilities and instruction necessary for the attainment of proficiency in the practice of the other branches of the profession and in pharmaceutical research.

Recognition

The school is accredited by the American Council on Pharmaceutical Education, and holds membership in the American Association of Colleges of Pharmacy. The object of these agencies is to promote the interests of pharmaceutical education; and all institutions accredited by the Council or holding membership in the Association must maintain certain minimum requirements with respect to number and qualification of faculty members, physical plant, laboratory and library facilities, curriculum, admission, graduation, etc.

The school is registered in the New York Department of Education, and its diploma is recognized by all the states.

Requirements for Admission*

The requirements for admission meet fully those prescribed by the American Council on Pharmaceutical Education, and the American Association of Colleges of Pharmacy.

---

* The right is reserved to refuse admission to applicants with sufficient scholastic credit, whose presence in the School would in the judgment of the Faculty Council be detrimental to the best interests of the School.

Admission to Freshman Class from Secondary Schools

An applicant from a secondary school may be admitted either by certificate, or by examination, or by a combination of the two methods.

Admission by Certificate: An applicant must be a graduate of a secondary school which is approved by the State Board of Education of Maryland or by an accredited agency of at least equal rank, and which requires for graduation not less than 16 units, grouped as follows:

Distribution of Units between Required and Elective Subjects: Required subjects 8 units, elective 8 units, total, 16 units.

Required Subjects: English (I, II, III, IV), 4 units; algebra to quadratics, 1 unit; plane geometry, 1 unit; history, 1 unit; science, 1 unit, Total, 8 units.

Elective Subjects: Astronomy, biology, botany, chemistry, civics, economics, general science, geology, history, vocational subjects (agriculture, commercial drawing, home economics, shops, etc.), foreign languages, mathematics, physical geography, physics, zoology, or any subject offered in a standard high or preparatory school for which graduation credit is granted toward college or university entrance. Total, 8 units, of which not more than four shall be vocational units.

A unit represents a year's study in any subject in a secondary school, and constitutes approximately one-fourth of a full year's work. It presupposes a school year of 36 to 40 weeks, recitation periods of from 40 to 60 minutes, and for each study four or five class exercises a week. Double laboratory periods in any science or vocational study are considered as equivalent to one class exercise. Normally, not more than three units are allowed for four years of English. If, however, a fifth course has been taken, an extra unit will be granted.

A graduate of an approved secondary school in Maryland who meets the certification requirements of the State Department of Education, or the Department of Education of Baltimore City, will be admitted upon presentation of the proper certificate from the principal. A graduate who does not fully meet these requirements may be required to present further evidence of ability to undertake college work. At the discretion of the Director of Admissions, this may include an appropriate examination. Such examination will be given during the first week of each of the months of June, July, August and September at College Park, Md. Applicants concerned will be notified when and where to report.

An applicant for admission by certificate from a secondary school not located in Maryland must be recommended by the principal, and should have attained the certification-to-college grade of the school. If the school does not have such quality grade, then the applicant's school grades must be at least ten points or one letter higher than the lowest passing grade of the school.

Admission by Examination: An applicant from a secondary school who is not eligible for admission by certificate may seek entrance through either of two types of examination: (1) he may appeal to the Director of Admissions for permission to report at the University for an examination, the result of which will be used in conjunction with the secondary school record to determine whether the applicant should be admitted, or (2) he may be admitted on presenting evidence of having passed satisfactorily other approved examinations in the subjects required for graduation from an accredited secondary school. Such examinations are offered by the College Entrance Examination Board, 431 West 117th Street, New York City, the Regents of the University of the State of New York, Albany, and the Department of Public Instruction of the State of Pennsylvania, Harrisburg.

Applications for admission must be approved, not only by the Director of Admissions, but also by the Committee on Admissions of the Faculty Council of the School of Pharmacy.

Admission With Advanced Standing

An applicant for admission with advanced standing must present official transcripts of his high school and college records and a certificate of honorable dismissal from the latter. Upon the satisfactory fulfillment of these requirements, the applicant may be admitted and given advanced standing as follows:

A student transferring from a college of pharmacy accredited by the American Council on Pharmaceutical Education may be admitted to advanced standing without examination and be given credit for that portion of the work of the first three years of the pharmacy curriculum which he may have completed.

A student transferring from a recognized non-pharmacy college may be admitted to advanced standing without examination and be given credit for the work completed in the general cultural or foundational subjects of the pharmacy curriculum.

No more than one year of credit in time will be given to any student applying for advanced standing from any institution other than a college of pharmacy, unless such credit shall be for graduate work in applied subjects done in a recognized graduate school or other educational institution.

In order that the training of the applicant for advanced standing may be equal to that of the members of the class which he seeks to enter, he will be required to take those courses, which the class has completed but which he has not completed and such courses will be given precedence over the more advanced courses in preparing his schedule of studies.

An applicant for advanced standing will not be given more favorable classification than he would have received in the college from which he transfers.

Special Students

An applicant who cannot furnish sufficient entrance credit and who does not desire to make up units in which he is deficient may enter as a special student and pursue all the branches of the curriculum, but will not be eligible for graduation and will not receive a diploma. The Faculty Council reserves the right to decide whether or not the preliminary training of the applicant is sufficient to permit admission under these conditions.

Requirements for Graduation

The degree of Bachelor of Science in Pharmacy (B.S. in Pharm.) will be conferred upon a candidate who has met the following requirements:

1. Completion of the full prescribed curriculum. The work of the last year must have been in courses offered in this school and must have been done in residence at this school.
2. A total semester credit of not less than 140, with a grade point count for each of the last two academic years of not less than twice the total semester hours of credit scheduled for the respective years.

Matriculation and Registration

All students are required to report in person for enrollment at the office of the School of Pharmacy, 32 S. Greene Street, Baltimore, Maryland, during the registration period at the beginning of each semester. A student entering for the first time must matriculate before he will be permitted to enroll.

Expenses

Application fee (With application)	$ 2.00
Matriculation fee (First-year only)	10.00
Tuition fee (per semester):	
Residents of Maryland	110.00
Non-Residents	135.00
Laboratory fee (per semester)	25.00
Graduation fee (Senior year)	15.00
Locker fee and breakage deposit (per semester)	5.00

The School of Pharmacy publishes annually a separate catalogue, and a copy of this, or any further information desired, may be obtained from Dean, School of Pharmacy, University of Maryland, Baltimore 1, Maryland.

UNIVERSITY HOSPITAL

Robert U. Patterson, M.D., C.M., LL.D., Superintendent.
Harold A. Sayles, Assistant Superintendent.

Location and History

The University Hospital now located at Redwood and Greene Streets in Baltimore, adjacent to the medical school buildings, was originally opened as the hospital of the University of Maryland School of Medicine in 1823. At that time it contained four wards, and was gradually increased by additions from time to time until by 1875 it had reached a capacity of approximately 250 beds. It was continued at that capacity until 1934, when the present modern hospital building was opened for the reception of patients, and provides 435 beds, and 50 bassinettes. In addition to furnishing the clinical facilities for the students of the University of Maryland School of Medicine, the hospital offers the services of a modern general hospital to residents of the State of Maryland.

Present Facilities

During the fiscal year which ended June 30, 1945, there were admitted to the University Hospital 10,179 patients who were furnished with 143,538 days of hospital care. During the same period 2,141 babies were born in the hospital. 72,736 patients were treated in the out-patient department of the hospital during that year. The Accident Room of the hospital rendered emergency care to more than 19,000 patients for the year which ended June 30, 1945. 7,877 visits were made by doctors, nurses and senior medical students in connection with the home delivery service outside of the hospital for the calendar year 1945.

SCHOOL OF NURSING

Florence M. Gipe, M.S., R.N., *Director, School of Nursing, Superintendent of Nurses, University Hospital.*

The University of Maryland School of Nursing was established in the year 1889. Since that time it has been an integral part of the University of Maryland. The school is non-sectarian, the only religious services being morning prayers.

Programs Offered

The School of Nursing offers a program of study to two groups: (a) those who desire to complete their work in approximately thirty-six months: (b) those desiring to take a five-year combined academic study and special training in nursing. Those who complete the latter course successfully may receive the degree of Bachelor of Science as well as a diploma in nursing.

SECTION V

Agricultural Extension, Research and Regulatory Agencies

EXTENSION SERVICE

Administrative Staff

College Park

THOMAS BADDELEY SYMONS, M.S., D.Aggr., Dean, College of Agriculture, Director.

EDWARD INGRAM OSWALD, B.S., Professor, Assistant Director.

VENIA MEREI KELLAR, B.S., Professor, Assistant Director.

ERNEST NEAL CORY, Ph.D., Professor and Head, Entomology, State Entomologist, Assistant Director.

PAUL EDWIN NYSTROM, M.S., Professor, Deputy Director in Charge Farm Labor.

ADDISON HOGAN SNYDER, B.S., Professor, Editor.

DOROTHY EMERSON, Professor, Girls' Club Leader.

MYLO SNAVELY DOWNEY, M.A., Professor, Boys' Club Leader.

FLORENCE HARRIETT MASON, B.S., Professor, Home Furnishing, District Agent.

KATHERINE GRACE CONNOLLY, Administrative Assistant.

Subject Matter Specialists

GEORGE JENVEY ABRAMS, M.S., Assistant Professor, Apiculture.

FLOYD JAY ARNOLD, M.S., Professor, Dairy Husbandry.

RONALD BAMFORD, Ph.D., Professor and Head, Botany and Plant Pathology.

JANE ELIZABETH BASTOW, B.S., Food Economist.

PHYLLIS BEAMER, B.S., Assistant in Entomology.

WALTER CROTHERS BEAVEN, Ph.B., Professor, Marketing Inspection.

URAL GUY BEE, M.S., Associate Professor, Animal Husbandry.

GEORGE MCSPADDEN BRIGGS, Ph.D., Professor, Poultry Nutrition.

GEORGE JOHN BURKHARDT, M.S., Associate Professor, Agricultural Engineering.

GORDON MANN CAIRNS, Ph.D., Professor and Head, Dairy Husbandry.

ROBERT PEARY CALLOWAY, M.S., Associate Professor, Marketing.

RAY WILFORD CARPENTER, A.B., LL.B., Professor, Agricultural Engineering, State Drainage Engineer.

JOHN JULIAN CHISOLM II, B.S., Instructor, Antomology.

JOHN COTTON, B.S., Associate Professor, Soil Conservation.

CARROLL EASTBURN COX, Ph.D., Assistant Professor, Plant Pathology.

HENRY WILLIAM DENGLER, B.S., Associate Professor, Forestry.

SAMUEL HENRY DEVAULT, Ph.D., Professor and Head, Agricultural Economics and Farm Management.

RANDOLPH HENRY DUFF, Instructor and Assistant in Visual Instruction.
CHARLES OLIVER DUNBAR, B.S., Associate Professor, Horticulture.
RUDOLPH SAMPSON FORRESTER, Assistant in Marketing.
GUY WATSON GIENGER, M.S., Associate Professor, Agricultural Engineering.
ENGEL LEE RUSSELL GILBERT, B.S., Assistant Professor, Entomology.
EDWARD WALKER GLAZENER, M.S., Assistant Professor, Poultry Husbandry.
CASTILLO GRAHAM, Ph.D., Associate Professor, Field Entomologist.
ARTHUR BRYAN HAMILTON, M.S., Associate Professor, Agricultural Economics and Farm Management.
WILLIAM EDGAR HARRISON, Assistant in Marketing.
RUSSELL CHENEY HAWES, M.S., Professor, Marketing.
LOUIS CASPAR HOLLAND, Marketing Inspector.
WILLARD COMSTOCK HUNTLEY, B.S., Egg Inspector.
WALTER FULTON JEFFERS, Ph.D., Associate Professor, Plant Pathology.
ROBERT ANDREW JEHLE, Ph.D., Professor, Plant Pathology, State Pathologist.
MORLEY ALLAN JULL, Ph.D., Professor and Head, Poultry Husbandry.
JOHN THEODORE KANGAS, B.S., Associate Professor and Assistant Editor.
ALBERT VICTOR KREWATCH, M.S., E.E., Associate Professor, Agricultural Engineering, Rural Electrification.
GEORGE SHEALY LANGFORD, Ph.D., Associate Professor, Entomology.
FREDERICK HAROLD LEINBACH, Ph.D., Professor and Head, Animal Husbandry.
JOHN WINFIELD MAGRUDER, M.S., Associate Professor, Agronomy.
ARTHUR FEHL MARTIN, B.S., Assistant Professor, Marketing.
HAROLD SLOAN MCCONNELL, M.S., Associate Professor, Entomology.
WILLIAM RUSSELL MCKNIGHT, B.S., Associate Professor, Egg Inspection and Marketing.
MARGARET MCPHEETERS, M.S., Associate Professor, Nutrition.
CHARLES PERCIVAL MERRICK, B.S., Assistant Professor, Drainage Engineering.
RALPH ALFRED PORTERFIELD, B.S., Instructor, Dairy Husbandry, Artificial Insemination.
WALTER BENJAMIN POSEY, M.S., Associate Professor, Agronomy, Tobacco.
GEORGE DEWITTE QUIGLEY, B.S., Associate Professor, Poultry Husbandry.
MARVIN EUGENE SENGER, B.S., Associate Professor, Dairy Husbandry, Artificial Insemination.
HELEN SHELBY, M.S., Associate Professor, Clothing.
MARK MERCER SHOEMAKER, A.B., M.L.D., Associate Professor, Landscape Gardening.
HELEN IRENE SMITH, B.A., Assistant Professor, Home Management.
FRANCIS C. STARK, JR., M.S., Assistant Professor, Vegetable Gardening.
JOSEPH MCNAUGHTON VIAL, B.S., Professor, Animal Husbandry.

Albert Frank Vierheller, M.S., Associate Professor, Horticulture.

Rufus Henry Vincent, B.S., Assistant Professor, Entomology, Japanese Beetle.

Earnest Artman Walker, Ph.D., Assistant Professor, Plant Pathology.

Edgar Perkins Walls, Ph.D., Professor, Canning Crops.

John William Wessels, A.B., Assistant Professor, Marketing.

Walter Sherard Wilson, B.S., Associate Professor, Assistant Boys' Club Leader.

Mark Winton Woods, Ph.D., Associate Professor, Plant Pathology.

County Agents (Field)

County	*Name*	*Headquarters*
Allegany	Ralph Frank McHenry, B. S., Associate Professor	Cumberland
Anne Arundel	Stanley Everett Day, B. S., Associate Professor	Annapolis
Baltimore	Horace Bennett Derrick, B.S., Associate Professor	Towson
Calvert	John Boone Morsell, B.S., Associate Professor	Prince Frederick
Caroline	Francis Marion Rogers, B.S., Associate Professor	Denton
Carroll	Landon Crawford Burns, B.S., Associate Professor	Westminster
Cecil	James Zenus Miller, B.S., Associate Professor	Elkton
Charles	Paul Dennis Brown, B.S., Associate Professor	La Plata
Dorchester	Harry Wesley Beggs, B.S., Associate Professor	Cambridge
Frederick	Henry Reese Shoemaker, B.S., M.A., Associate Professor	Frederick
Garrett	John Hurley Carter, B.S., Associate Professor	Oakland
Harford	Henry Morrison Carroll, B.S., Associate Professor	Bel Air
Howard	Warren Graham Myers, B.S., Associate Professor	Ellicott City
Kent	James Dunham McVean, B.S., Associate Professor	Chestertown
Montgomery	Otto Watson Anderson, M.S., Associate Professor	Rockville
Prince George's	Percy Ellsworth Clark, B.S., Associate Professor	Upper Marlboro

Queen Anne's	James Walter Eby, B.S., Associate Professor	Centreville
St. Mary's	Joseph Julius Johnson, Associate Professor	Leonardtown
Somerset	Clarence Zeigler Keller, B.S., Associate Professor	Princess Anne
Talbot	Rudolph Stockdale Brown, B.S., Associate Professor	Easton
Washington	Mark Kermit Miller, B.S., Associate Professor	Hagerstown
Wicomico	James Paul Brown, B.S., Associate Professor	Salisbury
Worcester	Robert Thornton Grant, B.S., Associate Professor	Snow Hill

Assistant County Agents

Allegany and Garrett	Joseph Matthew Steger, B.S., Instructor	Cumberland
Anne Arundel	W. B. Vanderford, B.S., Instructor	Annapolis
Baltimore	John Wheeler Ensor, B.S., Instructor	Towson
Carroll	Donald B. Williams, B.S., Instructor	Westminster
Frederick	Hugh Bradley Jones, B.S., Instructor	Frederick
Harford	Richard Spencer Sutton, B.S., Instructor	Bel Air
Kent	Stanley Burr Sutton, Instructor	Chestertown
Montgomery	Roscoe Newton Whipp, B.S., Instructor	Rockville
Washington	Raymond George Mueller, B.S., Instructor	Hagerstown

Local Agents—Negro Work

Southern Maryland and Eastern Shore	Martin Green Bailey, B.S., Instructor, District Agent	Seat Pleasant
Eastern Shore	Louis Henderson Martin, Instructor	Princess Anne

Assistant Local Agents—Negro Work

Montgomery	William Roger Brogden, Instructor	Spencerville
Charles	Milbourne Hull, B.S., Instructor	Bryan's Road
Anne Arundel and Calvert	John Robert Jennings, B.S., Instructor	Owings
Prince George's	James Rufus Taylor, B.S., Instructor	Beltsville
Somerset and Wicomico	James Marco Wainwright, B.S., Instructor	Princess Anne

County Home Demonstration Agents (Field)

Allegany	Maude Alberta Bean, Associate Professor	Cumberland
Anne Arundel	Miriam Frances Parmenter, B.S., Assistant Professor	Annapolis
Baltimore	Anna Trentham, B.S., Associate Professor	Towson
Calvert	Mrs. Florence Elizabeth Buchanan, B.S., Assistant Professor	Prince Frederick
Caroline	Bessie Marguerite Spafford, B.S., Associate Professor	Denton
Carroll	Justina C. Crosby, B.S., Assistant Professor	Westminster
Cecil	Ruth Elizabeth Robinson, B.A., Associate Professor	Elkton
Charles	Margaret Thompson Loar, B.S., Associate Professor	La Plata
Dorchester	Helen Louise Proctor, B.S., Associate Professor	Cambridge
Frederick	Loa Elizabeth Davis, B.S., Associate Professor	Frederick
Garrett	Mrs. Mary Bishoff Orr, B.S., Associate Professor	Oakland
Harford	Alga Dorothy Weaver, B.S., M.S., Associate Professor	Bel Air
Howard	Mildred Jane Flanagan, B.S., Assistant Professor	Ellicott City
Kent	Helen Nickerson Schellinger, B.S., Associate Professor	Chestertown
Montgomery	Edythe Margaret Turner, B.S., Associate Professor	Rockville
Prince George's	Ethel Mary Regan, B.S., Associate Professor	Hyattsville
Queen Anne's	Della Frances Lewis, B.S., Assistant Professor	Centreville
St. Mary's	Ethel Mary Joy, A.B., Associate Professor	Leonardtown
Somerset	Hilda Topfer, B.S., Associate Professor	Princess Anne
Talbot	Margaret Smith, B.S., Associate Professor	Easton
Washington	Ardath Ellen Martin, B.S., Associate Professor	Hagerstown

Wicomico	Helen Florence Willerton, B.S., Associate Professor	Salisbury
Worcester	Cynthia Anne MacIntyre, B.S., Associate Professor	Snow Hill

Assistant County Home Demonstration Agents

Allegany	Gloria Elizabeth Bohn, B.S., Instructor	Cumberland
Baltimore	Mrs. Nancy Elizabeth Mack, B.S., Instructor	Towson
Frederick	Miriam Louise Leiter, B.S., Instructor	Frederick
Montgomery	Virginia Lee McLuckie, B.S., Instructor	Rockville
Washington	Margaret Ann Webb, B.S., Instructor	Hagerstown

Local Home Demonstration Agents—Negro Work

Charles and St. Mary's	Margaretta Elizabeth Ramey, B.S., Instructor	Bryan's Road
Charles, St. Mary's, Prince George's, and Montgomery	Ethel Lawrence Bianchi, B.S., Instructor	Seat Pleasant
Somerset and Wicomico	Mrs. Omega Moore Jones, A.B., Instructor	Princess Anne

EXTENSION SERVICE

T. B. Symons, *Director*

Katherine Connolly, *Administrative Assistant*

Elsie G. Linkous, *Secretary to Director*

Cooperative Extension work in agriculture and home economics, established by State and Federal Laws in 1914, is designed to assist farmers and their families in the problems of agriculture and rural homes. Most of the work is carried on in the local communities, on the farms and in the homes throughout the State. It is conducted under a Memorandum of Understanding between the Extension Service of the University of Maryland and the U. S. Department of Agriculture.

The Federal Government, the State, and the Counties contribute to the support of the Extension Service in Maryland. There is a County Extension Service in each county, with a County Agricultural Agent and Home Demonstration Agent in charge, and assistants where funds permit and the work requires. Backed by a staff of Specialists at the University, these Agents are in close contact with rural people and their problems.

Practically every phase of agriculture and rural home life comes within the scope of Extension work. The Extension Service teaches largely by demonstrations and carries the scientific and economic results of the Experiment Station and Department of Agriculture to rural people in ways that they understand and use.

In Maryland, the Extension Service works in close association with all rural groups and organizations. It assists especially in promoting better marketing of farm products and encourages the marketing of home supplies by rural women. Work with rural women is one of the most extensive phases of extension education, including both the practical problems of the home and the cultural, economic, and community activities in which present-day women are engaging.

In addition to work with adults, thousands of boys and girls are developed as leaders and given practical education in 4-H Clubs. Through their diversified activities, the boys and girls are given a valuable type of instruction and training, and are afforded an opportunity to develop self-confidence, perseverence and citizenship.

Extension Short Courses

The Extension Service arranges and conducts short courses in various lines, most of which are held at the University. Some of these courses have been held regularly over a period of years and others are added as the need and demand develop.

Rural Women's Short Course

In response to requests of rural women for special training in a variety of subjects, the Rural Women's Short Course was inaugurated in 1922. Attendance at the course, extending for one week, has grown steadily, reaching more than one thousand women at recent sessions. The program offered has been broadened through the years and attracts women from all counties in the State. The third week in June is the date usually selected.

Boys' and Girls' Club Week

Members and leaders of boys' and girls' 4-H Clubs come to the University for a week each year, usually the latter part of August. Class work and demonstrations are given by specialists, and a broad program of education, inspiration and recreation is provided.

Canners' Short Course

For many years a short course has been held each year to aid canners in keeping abreast of the latest developments in their industry. It is usually held the third week in February.

Other Short Courses

Courses for nurserymen, florists, poultry flock selection agents, and cow testers are among those held in recent years. Announcement of such courses is made to those who may be interested.

AGRICULTURAL EXPERIMENT STATION STAFF

William Beck Kemp, Ph.D.	Director

Agricultural Economics

Samuel Henry DeVault, Ph.D.,	Professor and Head, Agricultural Economics
William Paul Walker, M.S.,	Associate Professor, Agricultural Economics
Arthur Bryan Hamilton, M.S.,	Associate Professor, Agricultural Economics
Arthur Montraville Ahalt, M.S.,	Associate Professor, Agricultural Economics
Emil Samuel Troelston, Ph.D.,	Associate Professor, Agricultural Economics
Luther Beecher Bohanan, M.S.,	Assistant Professor, Agricultural Economics

Agricultural Engineering

Ray Wilford Carpenter, A.B., LL.B.,	Professor and Head, Agricultural Engineering, State Drainage Engineer
George John Burkhardt, M.S.,	Associate Professor, Agricultural Engineering

Agronomy

William Beck Kemp, Ph.D.	Professor and Head, Agronomy
Royle Price Thomas, Ph.D.	Professor, Soils
Russell Grove Rothgeb, Ph.D.	Associate Professor, Agronomy
Albin Owings Kuhn, M.S.	Associate Professor, Agronomy
John Winfield Magruder, M.S.	Associate Professor, Agronomy
Walter Benjamin Posey, M.S.	Associate Professor, Tobacco
Howard Barr Winant, M.S.	Assistant Professor, Soils
George Francis Madigan, Ph.D.	Assistant Professor, Soils
Stanley Phillips Stabler, B.S.	Associate Agronomist
Conrad Liden, B.S.	Assistant Agronomist

Agronomy—Seed Inspection

Forrest Shepperson Holmes, M.S.	Chief Seed Inspector
John Thomas Mullady, B.S.	Seed Analyst
Olive Marian Kelk	Assistant Seed Analyst

Animal Husbandry

Frederick Harold Leinbach, Ph.D.
Professor and Head, Animal Husbandry
James Burton Outhouse, M.S... Associate Professor, Animal Husbandry
DeVoe Meade, Ph.D...................... Professor, Animal Husbandry

Animal Pathology

Arthur Louis Brueckner, B.S., D.V.M................. Director, LSSS
Harold Moon DeVolt, M.S., D.V.M....... Associate Professor, Pathology
Leo Joseph Poelma, M.S., D.V.M. .... Associate Professor, Pathology
Cornelia M. Cotton, Ph.D......................... Cooperative Agent

Botany, Plant Physiology, and Pathology

Ronald Bamford, Ph.D..................... Professor and Head, Botany
Charles Orville Appleman, Ph.D........... Professor Plant Physiology
Robert Andrew Jehle, Ph.D.,
Professor, Plant Pathology, State Pathologist
Walter Fulton Jeffers, Ph.D. .... Associate Professor, Plant Pathology
Mark Winton Woods, Ph.D........ Associate Professor, Plant Pathology
Russell Guy Brown, Ph.D................. Assistant Professor, Botany
Earnest Artman Walker, Ph.D.... Assistant Professor, Plant Pathology
Carroll Eastburn Cox, Ph.D. ..... Assistant Professor, Plant Pathology
Robert Neilson Stewart, M.S..................... Assistant in Botany
Robert DuBuois Rappleye, B.S.................... Assistant in Botany

Dairy Husbandry

Gordon Mann Cairns, Ph.D. ..... Professor and Head, Dairy Husbandry
Ira A. Gould, Ph.D..................... Professor, Dairy Manufacturing
Joseph Clement Shaw, Ph.D. .... Professor, Dairy Husbandry
Paul Bybee Larsen, M.S...... Assistant Professor, Dairy Manufacturing
Matthew Franklin Ellmore, B.S......... Instructor, Dairy Husbandry
Catherine Theresa Dellea, B.S.......... Instructor, Dairy Husbandry
Robert Eugene Stout, B.S........ Assistant Inspector, Dairy Husbandry

Entomology

Ernest Neal Cory, Ph.D.,
Professor and Head, Entomology, State Entomologist
Lewis Polster Ditman, Ph.D........... Associate Professor, Entomology
Harold Sloan McConnell, M.S........ Associate Professor, Entomology
George Jenvey Abrams, M.S............ Aissistant Professor, Apiculture

Horticulture

Irvin Charles Haut, Ph.D.	Professor and Head, Horticulturist
Albert Lee Schrader, Ph.D.	Professor, Pomology
Edgar Perkins Walls, Ph.D.	Professor, Canning Crops
Leland E. Scott, M.S.	Associate Professor, Pomology
Herman Todd, B.S.	Assistant in Horticulture
Mary Hoover Smith, M.S.	Instructor, Horticulture

Poultry

Morley Allan Jull, Ph.D.	Professor and Head, Poultry Husbandry
George DeWitte Quigley, B.S.	Associate Professor, Poultry Husbandry
George McSpadden Briggs, Ph.D.	Associate Professor, Poultry Nutrition
Charles Williams, M.S.	Assistant Professor, Poultry Husbandry
Robert Jones Lillie, B.S.	Assistant, Poultry Husbandry
Morley Gordon McCartney, B.S.A.	Assistant, Poultry Husbandry
Mary Juhn, Ph.D.	Research Professor in Poultry Husbandry

THE AGRICULTURAL EXPERIMENT STATION

W. B. Kemp, *Director*

Elizabeth Shank, *Secretary to Director*

The Agricultural Experiment Station is for Maryland agriculture what the research laboratories are for large corporations. Maryland agriculture is made up of forty thousand small individual businesses, and there is not sufficient capital, or sufficient income so that any one of these businesses can conduct research. Yet the problems which face a biological business such as farming, are as numerous and perplexing as the problems of any business. Certainly our production of food would be much more costly if it were not for the research results that have been obtained by the Agricultural Experiment Station.

The station is a joint Federal and State undertaking. Passage of the Hatch Act in 1887, which made available a grant in aid to each state for the purpose of establishing an agricultural experiment station, gave a great impetus to the development of research work in agriculture. This work was further encouraged by the passage of the Adams Act in 1906, the Purnell Act in 1925, and the Bankhead-Jones Act in 1935.

The work of the Maryland Agricultural Experiment Station which is supported by these Acts and by State appropriations centers at College Park. On the University campus are to be found laboratories for studying insects and diseases, soil fertility problems, botanical problems, and others. This is also the location of the livestock and dairy barns with their experimental herds. About eight miles from the campus at College Park, near

Beltsville, is located the Plant Research Farm of about 500 acres, devoted to work connected with soil fertility, plant breeding and general horticultural problems. Near Ridgely, Maryland, is a farm of approximately 50 acres owned by the Station, at which the problems of canning crops' growers on the Eastern Shore are studied. There is also an experimental farm at Upper Marlboro, which is operated cooperatively by the Federal Government and the Maryland Agricultural Experiment Station, and which is given over exclusively to the problems of tobacco growing and curing. There is also a number of acres rented near Pocomoke on the Eastern Shore, used for testing new varieties of potatoes. This work is checked and other varieties used, on farms in Garrett County, Maryland. Near Ellicott City there is a farm of 234 acres which is devoted to livestock problems. These different locations give a chance to conduct experiments in various parts of the state under conditions which exist where the results will be put into practice.

The Station, in general, exists as the "trouble-shooter" for Maryland farmers. When Maryland farmers have a problem, the first agency to attempt to meet this problem is the Agricultural Experiment Station. The solution of many difficult problems in the past has given the Maryland station an excellent standing with farmers of the State.

MARYLAND STATE DEPARTMENT OF MARKETS

Agriculture Building, College Park, Maryland

————————, *Chief*

W. C. Beaven, *Marketing Specialist and Chief Inspector.*

A. F. Martin, *Assistant Marketing Specialist, Supervising Inspector of Eggs, Dressed Poultry and Dairy Products.*

J. W. Wessells, *Assistant Marketing Specialist, Supervising Inspector of Fruits and Vegetables, and Inspector of Eggs and Dressed Poultry.*

Louis Holland, *Assistant Marketing Specialist, Supervising Inspector of Fruits and Vegetables.*

R. S. Forrester, *Assistant in Marketing, Inspector of Eggs, Dressed Poultry and Dairy Products.*

R. C. Hawes, *Marketing Specialist, and Administrator of the Egg Quality Program.*

The State Board of Agriculture of Maryland has by resolutions:

1. Adopted September 25, 1925, authorized the State Department of Markets of the Extension Service of the University of Maryland, to execute as agent of said Board the powers relating to the marketing of farm products, live stock and live stock products heretofore conferred upon the Board by law.

2. Adopted September 25, 1925, authorized the Department of Markets to execute as its agent the general powers of the Board relating to the inspection and regulation of Weights and Measures used in the sale and purchase of agricultural products.

3. Adopted February 1, 1928, authorized the Department of Markets to exercise the powers of said Board in the enforcement of the Maryland Apple Grading Law.

By law, the Department is the agency for the State Board of Agriculture in the enforcement of the following laws: (1) Cantaloupe Maturity Law, (2) Poultry Sale and Transportation Law, (3) Trade-Mark Law covering all fruits and vegetables, fresh or processed, (4) Grading Law covering fresh fruits and vegetables, (5) Inspection Law covering inspection and certification of fruits and vegetables, and (6) Fresh Egg Law.

The Department of Markets is the cooperating agency under joint memorandums of agreement with the Food Distribution Administration for the inspection and certification of fruits, vegetables, live and dressed poultry, eggs, butter, cheese, canning crops; and the preparation and release of Market News reports.

In 1939 the State Department of Health deputized certain of the personnel of the Department of Markets to act as agents of the State Department of Health in preventing the sale or shipment of fruit containing excessive spray residue.

The Department of Markets issues final inspection and certification for the Seed Certification Board on Irish and sweet potatoes and tomato seed stock. In cooperation with the F. D. A. maintains daily Market News Service in Baltimore on fresh fruits, vegetables, dressed poulry and eggs, also seasonal daily reports at Pocomoke on strawberries and Irish potatoes; and acts as agent for the F. D. A. in carrying out all purchasing programs for fruits and vegetables, including all details in connection therewith.

The headquarters of the State Department of Markets is at the University of Maryland, College Park, Maryland. Field offices are located in Baltimore, Hancock, Hagerstown, Salisbury and Pocomoke.

STATE HORTICULTURAL DEPARTMENT

College Park, Maryland

T. B. SYMONS, *Director of Extension Service.*

E. N. CORY, *Assistant Director of Extension Service, State Entomologist.*

R. A. JEHLE, *State Plant Pathologist.*

The State Horticultural Law was enacted in 1898. It provides for inspection of all nurseries and suppression of injurious insects and diseases affecting plants of all kinds. The work of the department is conducted in close association with the departments of Entomology and Plant Pathology of the University. The regulatory work is conducted under authority of the law creating the department as well as the State Board of Agriculture. For administrative purposes, the department is placed under the Extension Service of the University because of the close association of the work.

Work in this field is designed to control insects and plant diseases and to protect the public in the purchase of products of nurserymen and florists. A considerable part of the time of the staff is occupied by inspection of orchards, crops, nurseries, greenhouses, and floral establishments. Cooperation with the Federal Government in the inspection and certification of materials that come under quarantine regulations is another major function of the department. The department enforces the provisions of the Apiary Law, including inspection of apiaries. All activities pertaining to control of insects is conducted under the direction of Dr. E. N. Cory, State Entomologist and Assistant Director of Extension. Activities of the department in the field of plant disease control are under direction of Dr. R. A. Jehle, State Plant Pathologist. This service includes control and eradication of diseases of strawberries and other small fruits, diseases of apples, peaches, etc., inspection and certification of potatoes and sweet potatoes for seed, control of white pine blister rust, Dutch elm disease, etc.

STATE INSPECTION AND REGULATORY SERVICE

Chemistry Building, College Park, Maryland

Feeds, Fertilizers, Agricultural Liming Materials, Insecticides and Fungicides

L. E. Bopst, *State Chemist*
W. C. Supplee, *Chemist*
H. R. Walls, *Chemist and Micro-Analyst*
A. B. Haegy, *Chemist*
R. E. Baumgardner, *Chemist*
J. E. Schueler, *Chemist*
T. H. Lewis, IV., *Chemist*
R. G. Fuerst, *Chemist*
E. C. Donaldson, *Inspector*
W. J. Footen, *Inspector*
E. M. Zentz, *Inspector*
F. G. Baggs, *Clerk*
M. E. High, *Laboratory Technician*

The State Inspection and Regulatory Service is the enforcement agency for the State Feed, Fertilizer, Agricultural Liming Material and Agricultural Insecticide and Fungicide Laws. These laws are classified as correct labeling acts.

The work necessary in enforcing these laws may be divided into five general phases. They are, first, the registration of these agricultural commodities under specific brand names and definite guarantees as to composition and minimum quality, which must be shown at all times upon bags in which the commodities are distributed in the State; second, the collection of samples, which is handled by inspectors who are constantly traveling the State; third, the chemical and physical examination of these samples to substantiate the accuracy of label representation; fourth, the publication of the results of tests which are made—these publications are available to all and furnish current information at a time when it will be most valuable to prospective purchasers; fifth, the prosecution of those parties found responsible for flagrant violations.

On request, the Department examines gratuitously, samples submitted by buyers, if these represent materials coming within the jurisdiction of the laws enforced. Many purchasers of agricultural commodities take advantage of this service.

It has always been the desire of this organization to carry on a scientific constructive control in order that the sale of quality materials may be promoted. The Department depends primarily upon educational means and the direct cooperation of the industries for successful enforcement. In those cases where such methods fail, there is no alternative but to resort to the courts for appropriate action. As a result of the operation of this inspection service, buyers of agricultural commodities may make their purchases with every confidence of obtaining value received for money expended.

SEED INSPECTION SERVICE

Horticultural Building, College Park, Maryland

F. S. Holmes, *Inspector* Olive M. Kelk, *Analyst*
J. T. Mullady, *Analyst*

The Seed Inspection Service, a division of the Agricultural Experiment Station, administers the State seed law; inspects seeds sold throughout the State; collects seed samples for laboratory examination; reports the results of these examinations to the parties concerned; publishes summaries of these reports which show the relative reliability of the label information supplied by wholesale seedsmen; cleans and treats tobacco seed intended for planting in the State; makes analyses, tests, and examinations of seed samples submitted to the Laboratory; and advises seed users regarding the economic and intelligent use of seeds. The Service also cooperates with the Agricultural Marketing Service of the United States Department of Agriculture in the enforcement of the Federal Seed Act in Maryland.

Two and a half million dollars worth of seeds are planted annually in Maryland. Perhaps twenty-five percent of the field seeds and ninety percent of the vegetable seeds planted in the State pass through trade channels and are thus subject to the seed law. The work of the Seed Inspection Service is not restricted to the enforcement of the seed law, however, for State citizens may submit seed samples to the Laboratory for analysis, test, or examination. Specific information regarding suitability for planting purposes of lots of seeds is thus made available to individuals without charge. The growth of this service has been steady since the establishment of the Laboratory in 1912. Few Maryland home-owners, city or country, are not directly interested in seeds for planting in flower-bed, lawn, garden, or field.

DAIRY INSPECTION SERVICE

Dairy Building, College Park, Maryland

I. A. Gould, *Chief Examiner*
R. E. Stout, *Assistant Inspector*

The Maryland Dairy Inspection Law became effective June 1, 1935. However, the present activities of the Dairy Inspection Service are based on Article 43 of the Annotated Code of Maryland, Chapter 403 of the Laws of Maryland, 1941. The dairy department, functioning under the Agricultural Experiment Station of the University of Maryland, is charged with the administration of this law.

The purposes of the Dairy Inspection Law are as follows: (1) To insure producers who sell milk and cream by measure, weight and butterfat test, that samples, weights and tests used as the basis of payment for such products are correct; (b) To insure dealers who purchase milk and cream that their agents shall correctly weigh, sample, and test these products; (c) To insure correctness of tests made for official inspections or for public record. To achieve these purposes the law requires the licensing of all dealers who purchase milk and cream from producers, whether the purchases are by measure, weight, or test, and the licensing of all persons sampling, weighing and testing milk and cream when the results of such samples, weights, and tests are to serve as a basis of payment to producers.

Duties of the Dairy Inspection Service, resulting from enforcement of the Inspection Law, deal with the calibration of that glassware used in testing milk and cream and the rejection of inaccurate items; examination of all weighers, samplers, and testers and the issuance of licenses to those satisfactorily passing the examination; and inspection of the pertinent activities of weighers, samplers, testers and dairy plants.

The Dairy Inspection Law benefits the entire dairy industry by preventing unfair competition and unfair trade practices which result from improper methods of weighing, sampling and testing milk and cream, and the use of inaccurate and improper equipment. Also, requirements governing the accuracy of scales, construction of weigh tanks, and proper procedures result in greater efficiency and thus less loss to dealers and producers alike. The licensing of weighers, samples, and testers assures both the producer and the dealer that the men engaged in such work are competent.

The Dairy Inspection Law is administered on an educational basis with the view of promoting the mutual interests of dairy producers, dealers, and manufacturers. It is the belief of the administrating agency that since the producers of milk and cream and the dealers in these products both benefit by the law, they also should share in the responsibility for its enforcement. Such a responsibility involves close cooperation and harmony between all groups affected by the law.

During 1945, 118 permits were issued to dealers as follows: 14 plants in Class A (buying less than 500 pounds of milk daily); 23 in Class B (buying from 500 to 2,000 pounds of milk daily); 65 in Class C (buying from 2,000 to 40,000 pounds of milk daily); and 16 in Class D (buying more than 40,000 pounds of milk daily). In addition, 220 licenses were issued to testers and 90 licenses were issued to weighers and samplers.

STATE DEPARTMENT OF DRAINAGE

College Park, Maryland

RAY W. CARPENTER, *State Drainage Engineer.*

The State Department of Drainage was established in 1937. Its duties are to promote and encourage the drainage of agricultural lands in the State, to correlate the activities of the local drainage organizations in the State and to cooperate with State and Federal agencies in the interest of a permanent program of improved drainage.

This department administers funds appropriated by the State in 1939 for drainage of lands in Wicomico and Worcester Counties.

Affiliated Agencies on the University of Maryland Campus at College Park

The following Federal, State and private agencies are located on the College Park campus but are *not* under the direction of the Board of Regents of the University of Maryland or the Maryland State Board of Agriculture:

FEDERAL AGENCIES

Eastern Experiment Station, Bureau of Mines, U. S. Department of the Interior.

Fish and Wildlife Service, U. S. Department of the Interior.

Water Resources Branch, U. S. Geological Survey, U. S. Department of the Interior.

Agricultural Adjustment Administration, U. S. Department of Agriculture.

Maryland Crop Reporting Service, Bureau of Agricultural Economics, U. S. Department of Agriculture.

Maryland Headquarters of Agricultural Planning Field Service, Bureau of Agricultural Economics, U. S. Department of Agriculture.

Soil Conservation Service, U. S. Department of Agriculture.

Veterans Administration (Washington, D. C., Regional Office).

STATE AGENCY

Bureau of Control Surveys and Maps, Department of Public Works, State of Maryland.

PRIVATE AGENCIES

National Sand and Gravel Association Research Foundation.

Aviation Division, American Society of Mechanical Engineers.

SECTION VI

Records and Statistics

DEGREES CONFERRED, 1944-45

HONORARY DEGREES

Doctor of Laws

William Calvin Chesnut
Sam Rayburn
John Ward Studebaker

Doctor of Letters

Edwin Warfield Broome
Nicholas Orem

Doctor of Humanities

Tasker Gantt Lowndes
Ella Pippin Robinson
Lena Chew Van Bibber

HONORARY CERTIFICATES OF MERIT IN AGRICULTURE

Mary Whiteley Browning
David Cohen
Granville Haines Hibberd
Jesse Peyton King
Joseph Maguire Mattingly

THE GRADUATE SCHOOL

Doctor of Philosophy

Michael John Filippi
William H. Form
Elizabeth Edge Haviland
LeRoy Curtis Keagle
Albert McLean Mattocks, Jr.
Edward Orban
Wilson Huntley Power
Walter S. Sanderlin
Robert Simonoff
Thomas Richard Sweeney
Arthur Howard Thompson
Kenneth Lee Waters

Master of Arts

Vernon Norman Albrecht
Jean Marie Boyer
Marie Delia Bryan
Filiz Nazim Erol
Alice Holinger Finckh
Francis Vernon Getty
Alda Gregory
Constance Armstrong Hartman
Emily F. C. Holloway
Elizabeth Middleton Singer
June Ramsay Smith
Beatrice June Thearle
Lee Robert White
Nathalie Salley Woodward

SUMMARY OF STUDENT ENROLLMENT

For the Academic Year 1945-1946, as of June, 1946

Resident Collegiate Courses Academic Year	College Park		Baltimore		Total Less Duplications	
College of Agriculture	263		....		263	
College of Arts and Sciences	1,364		....		1,364	
College of Business and Public Administration	533		....		533	
School of Dentistry	....		244		244	
College of Education	425		586		1,010	
College of Engineering	651		....		651	
Graduate School	627		146		772	
College of Home Economics	313		....		313	
School of Law	....		209		209	
School of Medicine	....		383		383	
School of Nursing	....		244		244	
School of Pharmacy	....		103		103	
Total		4,176		1,915		6,089
Duplications Baltimore Intercollege	....		8		8	
Duplications College Park and Baltimore Intercollege	....		....		1	
Net Total		4,176		1,907		6,080
Summer School, 1945	465		....		465	
Grand Total		4,641		1,907		6,545
Duplications	255		....		255	
TOTAL Less Duplications		4,386		1,907		6,290
Mining Courses, Western Maryland						81
Fire Service Extension						728

Short Courses and Conferences

Conferences on Professional Relations	125	
Dairy Herd Improvement Association (Supervisors' Short Courses)	35	
Dairy Inspectors' and Technologists' Conference	136	
Florists' Short Course	85	
Junior Leadership Training School	115	
League of Women Voters (Voters School)	100	
Maryland Congress of Parents and Teachers	143	
Maryland 4-H Club Achievement Day	1,800	
Ornamental Garden School	251	
Rural Women's Short Course	1,200	
Tri-State Food Plant Conference and Canners and Fieldman's School	145	
Total Short Courses and Conferences		4,135
GRAND TOTAL, All Courses, Baltimore and College Park, less duplications		11,234

ORGANIZATION OF THIS CATALOG

This catalog has *six* major sections as follows:

Section I. General Information................Pages 18 to 48
Administrative Organization, Facilities, Admission, General Requirements, Fees, Living Arrangements, etc.

Section II. Resident Instruction at College Park..Pages 49 to 207
The organization and curriculum requirements of the several colleges and departments of the University at College Park.

Section III. Course Offerings at College Park....Pages 208 to 351
A listing of all courses offered at College Park, arranged alphabetically by departments

Section IV. Resident Instruction at Baltimore...Pages 352 to 383

Section V. Agricultural Extension, Research, and Regulatory Agencies......................Pages 384 to 399

Section VI. Degrees Conferred and Statistics of Enrollment ....Pages 400 to 412

Table of Contents, Inside Front Cover General Index, page 413

An admission application form, or any further information desired concerning the University, will gladly be furnished, on request, by

THE DIRECTOR OF ADMISSIONS,
University of Maryland,
College Park, Maryland.

UNIVERSITY OF MARYLAND
FATTI
MASCHII PAROLE
FEMINE
1807-1856-1920